

BY THE SAME AUTHOR.

- I. **The Philosophy of English Literature.** Lectures delivered before the Lowell Institute, Boston. 12mo, cloth, \$1.75
- II. **The Principles of Psychology.** 12mo, cloth . . . . . 1.75
- III. **Comparative Psychology; or, The Growth and Grades of Intelligence.** 12mo, cloth . . . . . 1.75
- IV. **Science, Philosophy, and Religion.** 12mo, cloth . . . . . 1.75
- V. **The Philosophy of Religion; or, The Rational Grounds of Religious Belief.** 12mo, cloth . . . . . 1.75
- VI. **The Principles of Ethics.** 12mo, cloth . . . . . 1.75
- VII. **The Principles of Natural Theology.** 12mo, cloth . . . . . 1.75
- VIII. **Philosophy of Rhetoric.** 8vo, cloth . . . . . 1.75
- IX. **Science of Mind.** 8vo, cloth . . . . . 2.00
- X. **Words of Christ.** 8vo, cloth . . . . . 1.75

G. P. PUTNAM'S SONS, NEW YORK.

# PROBLEMS IN PHILOSOPHY

JOHN BASCOM

AUTHOR OF "SCIENCE OF MIND," "GROWTH AND GRADES OF INTELLIGENCE," ETC.

NEW YORK & LONDON  
G. P. PUTNAM'S SONS  
*The Knickerbocker Press*  
1885

COPYRIGHT BY  
G. P. PUTNAM'S SONS  
1885

Press of  
G. P. PUTNAM'S SONS  
New York

## PREFACE.

THIS volume may seem to be constructed on the idea of gathering up the fragments that nothing may be lost. This precept, however, wise as it often is, does not express the law of production in the present case. A few points in philosophy invited more clear or more thorough statement. This labor I chose to undertake directly and briefly, rather than to attempt it as a part of a more extended and systematic work. One evil in philosophy is the accumulation of fruitless discussions. A few positions fortunately taken may be easily lost in their practical value by the extended treatises which accompany them, traversing old ground with no sufficient reward. Philosophy, above most topics, calls for an explicit statement of a few fundamental principles, and a pushing of inquiry in reference to them, till some satisfactory conclusion is reached. The present volume aims to make, in the most direct way, a contribution on the more obscure topics of philosophy. What it has to say is not, taken collectively, extended, and may be still farther reduced by the reader by confining his attention to the one or more subjects which may appeal directly to him. Only one of these discussions—that on liberty—has appeared elsewhere, and that essay has been somewhat modified.

While the discussions now offered touch very closely the points at issue between the empirical and the intuit-



tive tendencies in philosophy, they are not conducted with any express conformity to either mode of inquiry. There is, in the consideration of these fundamental questions, a distinct recognition of the fact that the phenomena of mind cannot find a rational substratum of thought within themselves as phenomena merely; and also a recognition of the fact that it is these very phenomena, and these only, that call for explanation. The effort has been, therefore, to bring appropriate ideas to the interpretation of mental facts, as broadly and fully contained in human experience.

Any obscurity that may attach to these discussions, while it may be due in part to a defective treatment, is also in part due to the unavoidable difficulty which attends on the concise handling of topics remote from familiar thought. The separation of each discussion involves occasionally a slight repetition, yet on the whole favors brevity.

# CONTENTS.

	PAGE
I—METHODS IN PHILOSOPHY . . . . .	1
II RELATIVITY OF KNOWLEDGE . . . . .	23
III SPONTANEITY AND CAUSATION . . . . .	57
IV FREEDOM OF WILL EMPIRICALLY CONSIDERED . . . . .	84
V CONSCIOUSNESS AND SPACE . . . . .	108
VI IDEAS—PRIMITIVE, SUBSIDIARY, AND GENERAL . . . . .	120
VII THE FUNDAMENTAL RELATIONS OF LOGIC . . . . .	129
VIII UNIVERSALITY OF LAW . . . . .	144
IX BEING . . . . .	161
X FINAL CAUSES . . . . .	169
XI HISTORY OF PHILOSOPHY . . . . .	177
XII A PHILOSOPHY OF HISTORY . . . . .	185



# PROBLEMS IN PHILOSOPHY.

## METHODS IN PHILOSOPHY.

A SURVEY of the products of human thought in philosophy impresses upon the mind some disagreeable conclusions. The most obvious of these is the extent and endless variety of the antagonism between systems of philosophy, and the hopelessly erratic character of many of these systems. When, however, we are about to draw the natural conclusion from such a result, that this field is either one of uncertainties, or one beyond the scope of our powers, we are led to observe that those who have expressed this opinion have not themselves adhered to it, but have frequently constructed theories, or given occasion to their construction, as extreme as the most extreme of those they have been intended to displace. Science has not for long rid itself of a metaphysic by scoffing at metaphysics, but has only led the way to one of a peculiarly difficult and untenable order. A certain fatality, or rather a supreme force of nature, is disclosed in thoughtful minds, driving them, sooner or later, more or less completely, within the charmed circle of philosophy. No amount of failure discourages the venturesome spirit of man from a new voyage of discovery in search of the poles of thought.

In studying the history of philosophy, we soon make a farther observation, that the course of speculation has not been without direction or without return, but has confined itself to a comparatively narrow and regular orbit, over which it has passed many times, including at each new circuit secondary points of correction and amplification. There is in this fact, wisely looked at, ground of encouragement. It seems to disclose a position of nearest approach to the truth, as well as one of farthest remove from it; and it indicates that if the mind is not yet able to hold fast and complete the gain of the one relation, no more can it be satisfied with the losses of the other. It seems possible that the alarming eccentricity of the present orbit of revolution in philosophy may disappear, and there remain only that slight oscillation of human thought which combines the free and the stable.

The extravagance of conclusions in philosophy compared with those of any other field of inquiry, seems to arise from the fact that research in this department commences with no recognized limitations. From the very beginning it casts off, of set purpose, the ordinary conditions of inquiry, and proposes, in one composite process,—initiated with little or no guidance—to define both the proper method and the sure results of speculation. Science has in hand for constant use all its cardinal ideas. It accepts as valid the ordinary experiences and the ordinary logic of life, and searches only for the conclusions which lie within them. Hence its processes are safely and easily tested, and its results are brought within that familiar circle which holds all our knowledge. A discovery in science may be fresh and surprising; it is not strange, incomprehensible, and contradictory. Any op-

pearance that it may have of inconsistency with previous knowledge, is wholly superficial, and soon passes away.

We believe that the present unfortunate state of philosophy is due in a high degree to a wrong conception of the problem offered by philosophy, and of the proper method of its solution. It can hardly be said that philosophy has uniformly accepted any thing for granted, unless it be the validity of the deductive process. It has more and more distinctly proposed to itself the task of putting secure foundations under all knowledge; or, if the more modest expression be preferred, of discovering the secure foundations that underlie all knowledge. If this effort is understood to exclude all postulates of all sorts, to start in clear and complete knowledge, and to carry the light of primary principles through to the very end, it involves an impossible and irrational effort. Its results so far have sufficiently shown its impossibility. The point we now urge is its irrationality. It is the office of reason

using the word to cover all our highest powers of comprehension in its ultimate action, not to turn all things into knowledge, but to disclose the necessary limits of knowledge, to discover what is rational and what is irrational in inquiry, and to see these restrictions which arise from the nature of mind, and to satisfy itself with them. Reason is not a kind of omniscience, before whose vision all things must become transparent. The highest function of reason is expressed in its power to satisfy itself with the unknown, provided that it is the unknown simply by lying on the limits of the horizon, simply by being a first term which must be conceded as a condition to a second term. Reason does not overleap itself, nor deem the effort to do so any other than the irrational thing which it is.

Reason, for instance, at once involves the integrity of the ratiocinative movement, and cannot go any deeper, or rise any higher than this concession. Reason sees nothing more clearly by raising a doubt at this point. What it does see, and what it ought—in reason—to strive at, with seeing, is that this integrity must be assumed in ratiocination, and cannot be proved by it. Exact, as mathematics is, and satisfactory as we regard its conclusions, it never strives to get deeper than its own axioms. It is contented with those foundations which have been laid for it in the structure of mind.

Metaphysics can never prosper as long as it casts off its own restraints, and assigns to itself the impossible task of making a beginning which is not a beginning, as it assumes nothing—and laying foundations which have no support. A rational inquiry, no matter how profound, searching, and inclusive it may be, cannot be entered upon successfully till its own laws and limits are recognized, for laws and limits it certainly has. What philosophy now calls for, that it may become fruitful and acceptable in its conclusions, is that its conditions shall be satisfactorily defined and firmly held. It will thus share the restrictions of other departments of inquiry, and the conclusions reached will not remain, as they now so often are, wholly alien to human knowledge. This, again, we say, is the highest reason, for it is not the office of reason to set itself aside, but to overlook itself, and to see what things in what manner are amenable to it. There is another way of asserting that metaphysics calls for a new method, a *novum organum*, that shall render impossible these eccentric results. There are involved in the incipient movements of thought fundamental experiments and principles, which, if observed, will cut it off from

those extravagant antics which are as the pranks of an unbridled horse.

Some of the principles of a sound metaphysical method we wish to point out, as we conceive them. As we enter on this undertaking, we need to bear in mind that it is the office of philosophy, in its highest function, to disclose what are, from the nature of the case, from the nature of the rational process with its adjuncts, the conditions of human knowledge; and what are its various degrees or kinds. We cannot go beyond these conditions, and the effort to do so is irrational; we cannot alter these degrees, and the attempt to do so is unreasonable. We are also to remember that it is the whole compass of knowledge, empirical and deductive, that we are to consider, in its present constructive force, as it abides in the convictions of men, where alone it exists as knowledge. This general knowledge is the only subject of inquiry.

With this object in view, we say, first, that no sound philosophy can, in explanation of human knowledge, set aside its primitive, empirical forms. This empirical knowledge pertains to the outside world of perception and the inside world of consciousness. We know things only in perception, we know thoughts only in consciousness. Things considered aside from perception have and can have no significance for us; nor any more can thoughts, save as disclosed in consciousness. Each set of facts can be apprehended only as they appear and where they appear. It is this appearance in their respective orders that provokes inquiry, and seeks explanation.

This is a condition of inquiry not given us simply as an expression of the weakness of our faculties, but a condition which we can see to be involved rationally in the fact of the possession of any faculties whatever. A



faculty, no matter what its scope, is, in reference to that which lies beyond it, of the nature of a limitation. Faculties of knowledge exist, like classes, by exclusion and inclusion. Each faculty implies a certain power, and that power, whenever exercised, implies the corresponding faculty. It is a means of knowing certain things in certain ways, and the exclusive means of knowing them in that special method. The power of vision apprehends things through the medium of light, and all knowledge of this order is of the nature of sight. Hence it is irrational to expect to know any phenomena otherwise than through their correlative faculties, and equally irrational to substitute for the facts offered in any one faculty the facts offered in some other faculty, — for the facts known in one way, those known in another.

When Kant perplexed himself about the want of a knowledge of the-thing-in-itself, he overlooked these rational conditions of knowledge. Noumena are known as the source of certain phenomena, and both noumena and phenomena are known in their own sufficient way under the limitations of the faculties applicable to them respectively. To wish to know the noumenon in any case in the same perceptive fashion in which we know the phenomena which accompany it, is to wish to banish noumena and substitute for them phenomena; it is to wish to see a sound, and to look for things in absolute darkness, in neglect of the conditions of sight. The noumena are known inferentially as the cause of certain phenomena. This is the method and the only method in which they can be known; this is the office and the only office they subserve in knowledge. To wish to put them elsewhere, as in the senses, or know them otherwise, as an inner construction of the imagination, is to forget the rational limits

of knowledge involved in distinct faculties. The-thing-in-itself is not a particle more perplexing, nor any less well known, than the color or sound to which it gives occasion. It is known as the cause of a specific set of phenomena. These are the only grounds on which the mind infers it. These it sufficiently explains, and these in turn sufficiently explain it. There is no residuum of unrelated facts on either side to demand further consideration. No matter how many forms of sense or of intuition or of reflection were given us, if we were not heedful of this limitation of reason by reason, we might still ask for more.

- In much the same way the mind irrationally perplexes itself about the atom. It may rationally proceed from particles to molecules, from molecules to atoms, and it may go farther than these if it finds any empirical data on which to advance. But when it reaches the end of its research, it is inadmissible still to conceive the atom as a more minute particle possessed of taste, color, hardness, and waiting, like its visible predecessor, for still further analysis. This is to forbid the reason to reach a rational end, and puts it in the attitude of an organ of sense, ever craving more sensitiveness as the condition of an indefinite enlargement of its power. But even if sensations are the analogon of knowledge, there are still limits to human comprehension, only they are the vague limits of impotency, against which the desires are ever fretting as the waves on the shore. The chemical atom subserves all the purposes of rational, constructive thought by giving it a first term, beyond which it finds no method of penetrating. The reason recognizes the fact that sooner or later it must reach such a term, that it must start with such a term, and is content, therefore, with the one provisionally offered, till it finds occasion to reconsider it, or to secure one more ultimate.

This principle not only prevents the mind from putting to itself impossible and unreasonable questions, but that of the appearance of the ultimate atom, a question that would admit only of an empirical answer, and is yet beyond the organs of experience. It renders the much more important service of restraining us in explaining away certain empirical facts by substituting other empirical facts for them no better known than themselves. Empirical facts of a given order are ultimate, and reducible into any other facts, and cannot be understood or explained any otherwise than in and under their own forms of experience. This again is a conclusion obtained from the oversight which reason has of the conditions of knowledge in its present forms, and is a much more modest conclusion than that notion of reason which endows it with an insight so keen, penetrating, and inclusive as to enable it to see to the bottom of all things, empirical and theoretical, and virtually to discern all things and all powers in its own exercise. When the reason wishes to see, it must see with eyes, or to hear, it must hear with ears, and this fact the reason is competent to understand.

We may discuss the musical scale through the number, rapidity and scope of the vibrations involved in its several notes. We may thus seem to find the theory of music in other senses than that of hearing, and to determine its fundamental laws in a region of motion aside from sound. But this separation is only apparent. Our conclusions would have no significance, did not these various forms of vibrations stand for notes which combine as sound, through the sense of hearing in a certain delightful way. Those facts of touch and vision, when entered in the theory of music, become so only by virtue of an ear

which apprehends them in the region of sound, and renders them as music.

When Spencer sets himself the task of expressing the phenomena of mind in terms of matter and motion, he is proposing an irrational thing, unless he also proposes empirically to inquire into given facts of matter and motion as fixed accompaniments of strictly corresponding mental facts. A mental fact is an ultimate experience, and no other experience can be substituted for it, and it can be substituted for no other experience. Such an effort is the subversion of experience itself, and an attempt to expound it outside its own range. No effort can lead to greater confusion than such an effort. It sets aside the fundamental conditions under which all our knowledge has been attained. It explains music with no reference to music, but only with a nomenclature of vibrations.

To speak of a sub-conscious thought, or a thought as some phase of a physical fact, is to use empirical language that has no counterpart in experience. No illusions are more remote, subtle, or enaming. A rapid play of imagery in the imagination sustains the words, gathers them in eddies, and swirls them on like leaves in the wind, while there are no facts to which they can return for interpretation, no knowledge into which they can settle when the calm of reason overtakes them.

A truly scientific movement is the exact reverse of this method. The facts to be discussed in science are first thoroughly inquired into on their own phenomenal basis, and to that apprehension the explanatory theory is carefully conformed. No method would be more surprising in science than one proceeding in a fashion so common in metaphysics: the inquirer saying to himself, these phe-

nomena are phenomena of color; let us first express them as phenomena of sound, and then explain them on that basis.

This transformation is peculiarly easy in philosophy, from the fact that almost the entire vocabulary of mind has been borrowed from the physical world, and has only been partially divested of its physical associations. We say "thought moves," and "a stone moves," and we are hardly aware that the one expression is any more figurative than the other. Yet the movement of the thought, and the movement of a stone have nothing in common save the idea of time, and both facts must be understood by themselves. A changeable color in a fixed position is as good or even a better image of a thought in motion than is a stone flung from the hand. What above all things we need in philosophy is that which thought inquiry calls for in science, the direct contemplation of the facts under discussion, divesting them of the images and illusions that may surround them. No form of misapprehension, then, can be more contrary to the method of science, or more irrational in itself, than a patient, preliminary effort to express the phenomena of mind in terms of matter and motion; an effort to confound the first and fundamental distinctions of experience as a condition of explaining them. A good illustration of this method—which, guiding itself by the well-known facts of mind, tries to put back of them a series of cerebral facts of which very little is known, and, as an explanatory process, to unite the two in a phraseology of hopeless contradiction, if, in the meantime, we insist on any clear interpretation in experience—is the ingenious and laborious volume of William Cycles on "The Process of Human Experience." The background of his thought, the screen on which the

obscure, flitting images of his philosophical imagination are cast, is what he terms the neurotic diagram. He is busy through many pages with its formations, fluctuations, mutations, permutations, which are to stand, in some unexplained way, for mental phenomena. It is not easy to express adequately the wasted ingenuity, the utterly unscientific method of such a book. The highest excellence to which it can possibly attain, is a happy terminology, holding just enough of physical imagery to sustain the otherwise sinking thought, and not enough to make the discussion seem purely physical. The designation, neurotic diagram, is a good illustration of the dexterity of the method employed. It is not absolutely unintelligible, and yet it covers no known fact, existing in any definite, known way. It is an idea on which any number of changes can be rung, while the listener is in no condition to challenge any one of them. This challenge should precede them all, and he has allowed himself to lose the opportunity.

What would be thought of a kindred method in science? Suppose one to have conceived the idea that vibrations of air have to do with musical sound, and, without establishing a fixed dependence of a definite order at any one point, should, by a simple word-process, following the known relations of music, have constructed a pneumatic diagram whose mutations were to stand for all the facts and relations of music, would such an exercise of his philosophical imagination—an imagination that deals with shreds of clouds, frayed to nothingness—be thought to have any scientific value?

The existence of a neurotic diagram in the case of pure thought, pure intellectual activity, is not so much as known, much less can this diagram be in any way

diagramed for the observation of any sense whatever. That is to say, there is no definite cerebral state of any order that is known to be the counterpart, or in any way the condition, of an equally definite thought. The first step, therefore, toward the construction of a neurotic diagram, has not been taken, to wit: the identification of any one cerebral state with any one mental fact other than a sensation—as its accompaniment or condition. What, therefore, in a true empirical method remains to be done, is by observation to connect the first and all succeeding terms of the alleged neurotic diagram, itself distinctly determined, with corresponding intellectual states. This would be a method like that which gave us the science of music. But, it may be said, this is impossible. If it is impossible, this form of explanation is impossible. It is no proof whatever to have ingeniously framed sentences that may, perchance, express truths of this order, provided the facts involved exist. It is left to philosophy alone to suppose that the statement of a theory, and that, too, in a most perplexed and obscure way, is in some manner equivalent to its proof. If there is any neurotic diagram, it is a physical fact, and is to be inquired into and known as such. If there are mental states which accompany its every mutation, these states are to be understood in consciousness alone, where alone they present themselves, and these two distinct lines of change are to be followed in their dependence on each other. The demand of sound thought is here as clear and definite as in the explanation of sweet sounds by their relation to certain vibrations. Not to have established even the first term in this procedure, to have run ahead of the entire inquiry with a large volume of phraseology, is a manner of investigation which belongs to

philosophy alone, and makes the great majority of its work unfruitful, and much of it contemptible.

We cannot set limits to ingenuity. One might design a board, like a chess board, put a few men upon it, give them cunning designations, and then send them through a reel of evolutions which in some way disorient mind, and relieve the processes of thought. — would this invention, therefore, be science, and would the movement become the laws of mind?

A grave danger in this direction attends on the use of technical terms in metaphysics. — A peculiar nomenclature obscures the connection between the explanation offered in any system and the common facts of knowledge to which they apply, and also greatly aids the mind in a deceptive, coherent movement, which is far more satisfactory than it of right ought to be. — The new tangled word seems to sustain the mind, its own words lead to work into vagueness, or confusion, or fantasy.<sup>1</sup>

That we must interpret human experience in all its orders under its own terms is also a method, a perspective of philosophy. — Philosophy, like science, cannot be said to have something to do, because there are phenomena which call for explanation. — If there are no phenomena, there is no science, and the sciences are found alone in their explanation which is brought to the facts proffered. — The facts

<sup>1</sup> The "technical terms" of which the eminent Alex. of a century ago Mr. Leslie Stephen, in his *History of English Thought*, says, "There is the philosophy of the imagination." The technical terms "lead to the great organic tension of any one time working out its end law." The figure is simply as a figure is very admirable, but when it becomes a fact, and then this, and the mind returns to its own ends to give meaning to the *technical term* and *phenomena* which bring it in the image, and is *from the facts* of which it is an image, the effect is very misleading and dangerous. — A series of facts is handled under the relation of another series of facts to which they bear only a remote resemblance.



which philosophy has to expound, to put in their most comprehensive form, are the facts of human knowledge; the method, limits, and certainty of that knowledge. But human knowledge is that knowledge other than philosophical—current among men, popular knowledge, literary knowledge, scientific knowledge. The form which this knowledge assumes, and the convictions which sustain it, are the phenomena to be expounded. A philosophy which ends in conclusions remote from human thought, conclusions which convert knowledge, so-called, into a series of illusions from which very little can be saved, has abolished the very phenomena for the explication of which it was called forth. But no science can remain if the phenomena to which it pertains are gone; no more can philosophy, if the fields of knowledge have been brushed away, if there is no knowledge which contains the conditions of belief. Kant's two Critiques—one of Pure Reason and one of Practical Reason—are an abomination. They imply that we may have a theory of reason which does not cover the facts of reason.

If the terms of matter and the phenomena of matter are coëxtensive with the terms and phenomena of mind, we have no room for any philosophy, for there is nothing which can furnish it data. What we had supposed its own peculiar data have turned out to be a deceptive reflection of another set of facts. The human experience to which we go for our philosophical data, knows matter under one order of facts and mind under another. A philosophy that abolishes this distinction, abolishes itself, by leaving nothing which it can do, nothing which it can deny.

In the eagerness with which men seek after the unity of thought, they forget that diversity is the counterpart of unity; that they are two poles which arise and sink

together. The simple unit has no unity. Unity is a product of mind and addressed to mind. It is a concurrent relation between different things. If we were to reduce the material elements to one, we should be immediately compelled to restore the diversity and so the unity of the world, by ascribing some subtle and obscure force to the positions of atoms, or to their forms. To abolish diversity is not to attain to science; it is so far to abolish science in abolishing its conditions. If the phenomena of mind are not in some peculiar way and forever phenomena of their own order, if physical phenomena are not also of their own order, the fundamental conditions of relation, comprehension, knowledge, have lapsed, and the world of thought has not room to count but sink into a unit, which can only be a dead thing in the world.

The effort to start with monism is irrational on the part of the human mind. It cannot pass from unity to plurality by a logical process simply. It must leave more than one thing given it as the basis of construction, and it can in no way convert the manifold into the single without losing both variety and unity. Unity is a relation between distinct things. The logical process demands at least three things as its condition, and the intuitive powers are limited in every case to their direct objects. We have no rational means of constructing many out of one, or of reducing many to one.

Still farther, if knowledge, that which is distinctly and preeminently knowledge—the permanent convictions of the human mind, including the contradictory speculations of a few persons concerning that knowledge—can gain no rational hold on the general mind. Reason would not justify such a result, and the inertia of habit would stand against it. Whatever that knowledge may be which is

called knowledge, it will be held fast and should be held fast in the face of any theory which denies its fundamental distinctions, and among these distinctions certainly is the apprehension of things as things, and thoughts as thoughts, with a corresponding use of language.

Majorities may have overwhelming power even in philosophy. If ninety-nine men affirm that they see a certain object, their testimony must displace that of the hundredth man who cannot see it. What men uniformly think they know, what they enlarge as knowledge and use as knowledge, determines what knowledge is, and this fact the philosopher cannot subvert or alter by a theory of any sort. If any theory of philosophy cannot push itself, step by step, point by point, along the lines of experience and of reason, uniting for its support the convictions of men, it has no more value than any erratic assertion. The test of truth is the force of truth moving among men's thoughts; and no assertions which do not enter consistently, under the first terms of human experience, into our knowledge of the world within and without, can carry conviction.

We have referred chiefly to those substitutions which put physical facts, or the connections of physical facts, for those of mind. The censure involved in the method now discussed is equally applicable to the reverse method. The mind moves in its inquiry into things from the particular to the general, and from the general to the particular. This is a characteristic mental process, a relation of thought, and as such cannot be put for material connections and dependencies. Things have their own dependencies, and the full circuit of knowledge includes, first, the facts as offered in sensation, subject to the relations of space and time, and grouped in causal dependencies; and,

secondly, their intellectual unity slowly wrought out of this physical diversity by the action of the mind. To allow the mental process to proceed without its antecedent conditions, or, when it proceeds, to obscure the independent character and relation of the facts before it as offered in experience, is a confusion of the same order with that already discussed, and one in which we reach a unity that abolishes the diversity under consideration, and so abolishes itself.

The first condition of a sound philosophy is to accept and study the facts in their own order which call it out; the second condition is to take fully, and freely to use, the conditions involved in reason itself.

Science settles its facts, and then proceeds to their solution. Mathematics defines its axioms, and so makes ready for its proof. Philosophy should do both. Reason, equally in philosophy as in mathematics, demands for its continuous movement certain conditions, and for these conditions it can give no further reason than their necessity, the mere fact that they are inextricably woven into its processes, and presupposed by them. A reason that will not accept its own paper is hopelessly bankrupt. If any form of speculation proceeds in neglect of these principles, two results are likely to follow: some form of knowing will be extended beyond its own province, other forms of knowing will be denied their proper force. Thus in Hegelianism the logical process is made to involve and take the place of perception. It thus swallows up its own data.

There is a very extended consensus in philosophy as to the presence of fundamental ideas or conditions of thought in human knowledge. The intuitive school regards them as the first products of insight: that initial action of

reason which prepares the way for all other action. They thus stand in much the same relation to the conclusions of philosophy that axioms do to the proofs of mathematics. As primary, reason can put nothing back of them; as simple, it can subject them to no analysis. It has no other resource than to accept them in their own light as the conditions of all later knowledge. The empirical school looks on these relations as the slow, instinctive accumulations of conviction in certain unchanging lines that have belonged to human experience through many generations. It is not necessary that philosophy should settle the question between the two schools before establishing its own method of procedure. On either view, it is not rational to try to push reason back of its own premises, whether these premises are given by an individual act of clear comprehension, or are the product of many obscure collective acts. In either case, they are the postulates of all farther progress.

There are three lines of action open in reference to these ultimate supports or forms of thought. We may provisionally set them aside, and strive to secure other foundations or deeper ones for our ratiocination. This method can only lead to bewilderment and extravagance, for the simple reason that human knowledge rests on this basis, involves everywhere these conditions, and must be expounded under them. If we could reach any other starting-points,—which we cannot—they could be no more final than these convictions, and would suffer the insuperable difficulty of not being familiar to human thought. As soon as philosophy begins to break with these first truths, taken simply and fully, the thoughts of men cease to follow it, and it becomes a wayward, uncorrective romance of reason.

We may take a portion of these primary ideas and reject others. But in the degree in which we turn aside from these first principles, do we limit the field of thought and impoverish our results. Whatever portion of facts falls to the rejected ideas will be misunderstood or perverted by us. By this method, as contrasted with the previous one, we save a part of our inheritance of knowledge, instead of wasting it all, with the added inconsistency, however, of choosing between ideas each of which rests on the same ground. It has been a somewhat favorite method in modern philosophy to assume as little as possible as our premises of philosophy, and to conduct philosophy as far as possible by a process of reasoning. The logical movement has more charms for the mind than any other, and has been instituted on very insufficient data, with the expectation of supplying their deficiency by its own adroitness. This method is quite contrary to that of science or of mathematics. Having made for sufficient reasons any one concession, or established any one conclusion, we should advance at once over the entire ground covered by it. If we have accepted one idea, like that of causation,—which we find a necessary condition for the discussion of physical dependencies, or for making them in any way subject to thought—we have given full warrant to any other idea bearing the same relation to other phenomena. It becomes a foolish higgling, by which we cheat ourselves and others, not to make free use of the first concession. When we find occasion for a second axiom, we have as good right to it as we had to the first, and ought in wisdom at once to avail ourselves of it. While pursuing the same path, we should not bridle up at some sudden turn in it, accuse ourselves of making progress too easily, and raise anew the questions we have

once settled. The scientist accepts and uses in the most unhesitating way the idea of causation, and the historian that of spontaneity. They do not deem their conclusions vitiated by these fundamental assumptions. The meta-physician has no advantage over them save that of giving more explicitly the reasons of these assumptions in the nature of mind. The assumptions were assumptions and were right assumptions. Philosophy does its work fully, if it justifies them as assumptions. It is a foolish dream of speculation to proceed without assumptions. This is vision with no horizon. An horizon must appear, and when it has appeared, it must be left to complete its full circle. When a Hegelian assumes the rationality of the reasoning process, and nothing more, he is irrational, as he can give no reason for what he accepts which does not compel him to accept more than it.

The only sound method that remains to philosophy is to seek for the conditions of thought, and accept them all as conditions of some branch of human knowledge. Descartes, in reasoning from thought to a thinking agent, availed himself of one of these ideas as giving a safe foundation to a particular judgment. If, instead of making this one judgment fundamental, he had directed his attention to the ideas of existence and causation—more strictly, spontaneity—on which it proceeded, he would have indeed laid hold of fundamental truths which would have been the framework of a complete philosophy. Philosophy must accept human knowledge for what it is, knowledge; seek for the physical and psychological conditions under which it has arisen, and so comprehend it. Chief among these conditions are the primary, axiomatic ideas or relations under which judgments are shaped, and by means of which the experiences

[illegible]



ideas can be otherwise established than by their consistent and persistent presence in the mind. . If we settle down to the phenomenal and unphenomenal in their own places, and with their own authority, we have the antecedent condition of knowledge, and so of philosophy. If we first carefully settle the ultimate intuitions of mind, we have the limits within which inquiry can be successfully pursued.

## II.

### RELATIVITY OF KNOWLEDGE.

It may seem a remote and speculative region in which the mind enters, when it enquires into the nature of knowledge, and begins to act the part of a critic upon its own powers, instead of contentedly employing them within their own field. Yet this collective estimate of knowledge, and this oversight of life as a whole, have always offered a fascinating direction of effort to the strongest and the purest men. Indeed, if these questions are once raised: What is the range and value of human knowledge? How far is it made up of transient impressions and how far of permanent principles, relations in their nature universal and eternal? the mind gains no rest till it gives them some answer. What the thoughtful man above all things refuses to do, is to take the sensory world in a sensory way, at its own impressional value, and float on with it. He is ever struggling in every variety of method to rise above existing conditions, to estimate them, to see their direction, and, if need be, to guide them.

One of the most general affirmations of philosophy is that of the relativity of human knowledge. From Protagoras, who affirmed that "man is the measure of all things," that "right and wrong are matters of opinion," to our own time, the relativity of knowledge has been a

very common, and often a very unqualified, assertion. The phrase is susceptible of very various depths of meaning, and may thus be employed in reduction of the value of knowledge in very different degrees. We can not deal wisely with the several forms of knowing, or justly estimate the scope and worth of our conclusions, without some sufficient insight at this very point, the relativity of knowledge. Especially do we need this insight to protect ourselves against that depreciation which the value of human thought sometimes suffers from empirical philosophy; till wisdom becomes nothing more than the transient impresssions of transient persons.

There is a sense in which knowledge always is and must be relative; but the assertion of relativity is sometimes made when it is to be used in a meaning quite beyond that justified by this primary fact, and yet is to draw its force from it. Relativity, as a self-evident and harmless assertion, is made to stand for relativity as an extreme and destructive theory. All knowledge is relative in this sense, that it involves some thing known and some one who knows it, and that it is the result of the relation between the two. Knowledge as an act involves a relation between two terms. This is a truth, however, of no special significance in an estimate of the value of knowledge. Knowledge may have the utmost generality and certainty, and this relativity still remain. The form in which the assertion of relativity implies weakness and limitation in our faculties, and results in a grievous loss of value in all thought, is that which involves a reduction in generality of what is known by us, making it dependent on special endowments, on special physical faculties, and special states of these faculties. Knowledge may thus become throughout as evanescent and changeable as the circum-

stances which attend on its acquisition. It is a fact of no moment that knowledge involves a knowing faculty, if that faculty is of a general and unconditioned order, a pure, transparent power of knowing; it is a fact of the most destructive character, if each faculty vitiates the product of thought by the accidents of an ever-variable and personal factor.

There is another form of relativity equally certain with that just referred to, and somewhat more significant. The circle of human powers does not exhaust the compass of possibilities. Other impressions and relations may remain to be known by beings differently organized physically from man, or more highly endowed intellectually. The truth of this assertion does not materially alter the worth of human knowledge. Its value does not turn primarily on its extent, but on its validity, its permanence, within its own field. We are not interested in affirming a knowledge of all truths, or some little knowledge of each truth, but that we know some things; that our knowledge is consistent with itself, consistent with all the knowledge of others, and that it concerns universal relations. If the thought of man, like the organic stimuli of animal life, are of no significance outside of the experience in which they arise, then scientific truth is a single, and may be a transient, term in an unfolding process. Truth ceases to be an open way into an intellectual universe, common to all intelligences.

The destructive meaning of the phrase, relativity of human knowledge, is that rendering of it that so conditions our impressions on the faculties which confer them as to limit the generality of truth, and make it more or less dependent on special organization. Any loss of universality is loss of value. Sensations are the copper coin

of intellectual currency, and if they become the basis of all knowledge, they debase it at once into a retail traffic. Relativity of this order may have four degrees: Knowledge may be relative to the existing state of one's faculties; it may be relative to these faculties as uniform personal powers; or it may be relative to them as the endowments of a race or nation; or relative to them as the characteristics of the human race. Consistency, however, tends to carry each later assertion backward into the next deeper one, till the generality of truth is entirely lost. The first affirmation, if true, would wholly destroy knowledge; putting in its place the most fickle impressions. The second assertion would greatly narrow its scope; yet even this intense meaning is not unfrequently present in the statements of philosophy. A strictly empirical philosophy involves relativity of this extreme order. We shall have but a poor estimate of human knowledge, if we make it wholly dependent on the properties of things apprehended in the senses. Oxygen discloses its properties in reference to other elements, as hydrogen, carbon, nitrogen. A new set of relations or qualities is revealed by its combination with each new element. These new qualities, as those of water, are not referable to the oxygen or to the hydrogen separately, but to the two in combination. The properties of water are not an aggregate of those of its two elements, but are peculiar to it as a particular combination. The properties of oxygen are thus defined in reference to those of hydrogen, and those of hydrogen in reference to those of oxygen. Here we have an example of complete relativity of the second class. If the impressions of each individual are made up in like manner of two terms, the external facts and the internal states to which they are addressed, their impressions would have no claim to the

character of truths. We could no more reason from the affirmations of one mind to those of another, than we can from the properties of water to those of carbonic-acid gas. The value of knowledge, so-called, would be of the most limited and personal order. In the lower senses we experience some facts of this individual character. If we lay hold of these facts as a clue, and carry the principle involved in them to the interpretation of the general convictions of men, knowledge immediately becomes a product of the most ephemeral nature.

Few, however, have the boldness to affirm a relativity of so extreme a degree. Indeed the assertion is of so violent a nature as to discredit itself, and to undermine its own force in common with that of all truth. A denial no more than an affirmation can win authority without generality. The assertion of relativity, if it has any value, owes that value to the fact that it is a general truth; that men can agree in making it, and that when they have made it, it means to them all the same thing. An affirmation of relativity, therefore, in this sense destroys itself in the common destruction which it brings to all truth.

A third form of relativity is more vague and less immediately prejudicial to knowledge. It affirms that different phases of mind and different stages of cultivation, which may be more or less closely connected with the distinctions of nations, races, and ages, may carry with them peculiar methods of looking at truth, and this to a degree involving distinct varieties of thought. Across these barriers knowledge is incommunicable. It ceases to be one kingdom, and becomes many kingdoms. This assertion has been more frequently made in connection with the complex truths of morals; and different convictions in morality have been regarded as geographical facts. The

spiritual history of the race is thus cut through and through, as if the body of a man were halved with a broadsword. Knowledge in its highest form becomes local, like a climate. However instructive the impressions to which men may be subject in one place and time, this wisdom can not be carried over to other places and times. The only fact which gives color to a statement like this is that of growth in spiritual knowledge; but in order that the fact of growth may be thoroughly significant, we must concede the generality of the common principles on which it proceeds. A second step which is not in correction and expansion of a first step, is not one of coherent movement. A diversity in forms may superficially be taken for one in substance also, but if it is so regarded, the root of growth is lost. The so-called perennial plant is not perennial, hardly even an annual, as it yields a seed not true to itself. An esoteric knowledge is ruined by its own variety. It is not superior knowledge, a more general and extended apprehension, but inferior knowledge, an apprehension confined to a narrow class. If there is any philosophical consciousness not shared by all, or in the line of development of all, the experience of the race of men is correspondingly broken up, with a value in each fragment in proportion to its size—that is, in proportion to its generality. There is no longer an opportunity to assert an absolute value, for absolutism has been lost in affirming the limited range of truth. The only absolutism that can belong to the facts of consciousness is generality, latent potentiality. Philosophy has not shown the respect it should show for human knowledge, the elements of convictions common to the race. In the degree in which this disparagement prevails in philosophy are its own foundations undermined. If philosophy does not disclose the

unity of human knowledge, expounding it in its existing and transitional forms, it becomes a matter of private concernment, a dream of interest only to those who are dreaming it. So looked upon, the various phases of philosophy are less interesting than popular convictions in the very degree in which they are more local, more personal. Philosophical assertions thus wither more quickly than the words of the people, have less breadth of territory in the human mind. The idea that underlies philosophy is universality; subvert this and you in the same act and instant subvert it. We shall best see the degree of relativity properly covered by this third form of statement, when we come to consider the comparative breadth of the various kinds of knowledge as the products of distinct faculties.

The fourth assertion of relativity is more transcendental, and does not declare its disastrous character except in connection with cosmic and ontological questions. It affirms that the forms of knowledge are to be ascribed to the knowing mind, and that we can assign their forms no force beyond the range of human impressions. Thus Kant asserts that the fundamental categories of comprehension, as space and time, do not pertain as conditions to the objects considered, but to the faculties which take them into consideration. The mind thus puts upon the things it contemplates forms of its own. These, like an artificial medium, lie between our powers and the objects of knowledge. We can neither escape the form, nor affirm its correspondence with any fact. Human experience is thus made consistent within itself, and universal within the human family, but is cut off from any knowledge of things-in-themselves, or from any participation in knowledge of an absolute character which we may ascribe to God. The island of thought which we inhabit is a conti-



ment, but it is none the less an island. We can assign it no relations in that vaster realm of truth to which we give the comprehensive unity of a universe. Human nature is of one order, and that so positive an order, that it warps at once into its own forms all that comes under its consideration. Knowledge, so-called, is a web of its own weaving, and may no more be the true union of the things it unites, than is a spider's net of the spears of grass from which it swings.

It may seem strange that a relativity of this remote character should disturb the mind, since it still leaves to the mind the entire realm of thought, a universe broad enough for all its activities. Knowledge remains knowledge of a very universal character, as universal as the human family. Knowledge is thus possessed of a generality as great as the word admits, since knowledge stands for human knowledge, that is that phase of impressions among men which is designated as knowing. If any being knows, he must know in conformity with these forms which define knowledge.

But man is at once jealous of the existence of something which he still thinks of as knowledge though its form is inconceivable to him--more extended, absolute, universal than his own. He herein bears silent testimony to his conviction of the sweep of thought, and of his desire to know things as they are in themselves, and not in a manner peculiar to himself. His belief and wish concur in the conviction that human knowledge and the knowledge of absolute reason meet in one centre, and lie in one field. This universality is to man a corollary from the nature of knowledge, and from the relation of reason to the Supreme Reason.

This last assertion of relativity springs from a specula-

tive extravagance in thought, in consequence of which it refuses to rest within its own proper limits, and is unable to abide in the faith and unity of pure reason. There is no surer sign of health in the body than the ability to rest, nor in the mind than the power to seize and serenely hold its own centres without superfluous presumptions, or vagrant speculations, or flickering and misleading lights cast upon higher processes of comprehension by lower ones. This final form of relativity arises, as we shall see more clearly later, from pushing explanation into a region incapable of receiving it, from putting a supposititious foundation under the foundations offered by the knowing powers themselves.

A separate consideration of the products of the several powers of mind—sense, understanding, and reason—will disclose more distinctly the degrees of relativity in human knowledge. Relativity will be found to vary with each of the three faculties. The most complete relativity, that of the first and the second form, finds some admission in sense; the third form appears in the understanding; while an effort is made to test the fourth phase of relativity on the action of reason. If we consider these three powers in their real gifts, we shall find that the partial opacity of the senses begins to give way in the translucent understanding, and disappears altogether in the transparent reason, the perfect medium of knowledge.

Sensations are first terms, and constantly recurrent terms, in knowledge. Sensations, the direct products in consciousness of physical sense, are rapidly and extendedly modified by the action of mind, till they become perceptions of a more or less complete order. The perception includes the sensation, and also the judgments which it has come to immediately involve. When a blind man

reads by raised letters, he does so by virtue of sensations that have taken up a large amount of inferences or interpretations, and have thus become perceptions. Sensations are the raw material of knowledge. In sensation there are three terms: the external cause, the bodily organ, and the internal impression. The precise contribution of each of these to the final result it is impossible to give. Indeed this very language implies a wrong method of looking at the subject. A given sensation, as the flavor of a peach, is not a compound product made up of three constituents. It is a result of its own order appearing in consciousness, and wholly in consciousness. The causes as causes are merged in the effect, and have in it no separate coëxistence. There may be other concurrent manifestations of these causes, but these constitute no part of the sensations. It is unphilosophical to look in the very sensation for the external object, or the intermediate organ, as much so as it would be to search any effect for the very cause involved in it. This cause for the time being is exhausted in, and fully expressed in, the effect as an effect; and can sustain no phenomenal antithesis to it. All that we are interested in, when we inquire concerning the relativity of human knowledge, is the relation of sensations to external objects. Do likeness and identity in objects carry with them likeness and identity of sensations? There is neither ground nor occasion for an assertion of resemblance between any given sensation and its immediate occasion. Causes and effects are never in this manner comparable. All we are able to compare are the sensations of different persons, or of the same person at different times, in listening to the same sound, or in looking at identical objects. Are these sensations specialized in each case by the peculiarities of individual

constitution, or are they general? Are the sensations excited in us by the same object, true to themselves?

The law of causation assures us that the same conditions will be attended by the same results. The inquiry, therefore, is, How far are the conditions of sensation universal? The external objects are the same for all, but are not presented to the same person on different occasions in the same manner, or to the same personal conditions on his part. To different persons the conditions of presentation and reception may be still more diverse. We have here permanent agreements with constant diversity. The universal and the particular unite in a very complex way. The absolute does not exclude the relative, nor the relative the absolute. They permeate each other, and neither is complete. By suitable analysis both can be held fast.

That relativity which is due to the changing conditions under which external objects are presented to the mind, and to the diverse modes which fall to the same person on different occasions, is corrected by memory and judgment. The mind is not subject to the impressions made at any one moment upon it, but carries over its impressions through the continuous stream of its experience. It is thus able to recognize both the generality and the particularity of its knowledge, and thereby to lay a portion of its acquisition. The reasoning which is proper to it does not cover up or disguise the generality of the principles which underlie it. The general is always shining distinctly through the particular in relation. The movement is mutual interpretation.

While the organs of sense are various, and various individuals, they are far more remarkable for their agreement than their diversity. As any organ, like the eye, is capable

any one person, coherent with itself in its presentations, so also are corresponding organs in different persons capable of consistent use for general ends of knowledge. Common belief and strong proof are on the side of essential agreement throughout the field of sensation. Obvious agreements carry with them the presumption of deeper agreements, and agreements of causes of agreements in results.

It is not possible to interpret human experience explicitly and certainly at this point. We have no such knowledge of the organs of sense as to enable us to identify their modes of action in different persons. Nor have we any means of so comparing sensations in diverse minds as to be sure of their agreements and disagreements. If we take any two sensations, as the odor of a rose, entertained by different persons, we cannot put the two alongside of each other for an exact determination of their qualities. The inference, however, is strong that apparent agreements express real ones; that likeness of organs involves likeness of functions; and that the disagreements which we occasionally discover are, as they seem to be, exceptions. At all events, whatever may be the degree of diversity in sensations, it is not here that a sceptical philosophy loves to lay the emphasis. These disagreements are only instanced as a means of inference to deeper ones.

The third term in sensation, the mind itself, gives occasion for variation in results, much as does the first term, the object itself. The mind is not in the same state in reference to knowledge and attention in different persons on the same occasion of sensations. These sensations may, therefore, impose themselves in diverse ways on diverse minds; a diversity, however, which expresses a

portion of the changeable facts involved, and does not affect the value of the sensations as terms of knowledge. The point at which difference would most interfere with knowledge is not the variation of physical facts or of mental states, these are both distinct factors in the problem itself but an obscure variety in the organs of sense by which they would become changeable and uncertain media of communication. Ambiguity in the senses, like ambiguity in language, would escape our observation and pervert our knowledge.

It is to be observed, however, that the higher senses, those most used in the acquisition of knowledge, are manifestly more perfect and uniform in their work than the lower ones. The senses of taste and smell are widely different in different persons. Flavors and odors agreeable to one are disagreeable to another, and those easily recognized by one escape another altogether. Yet the sense of taste, if it is used protractedly as a means of discrimination, as by a taster of wine, or of teas, becomes correspondingly exact in the data which it gives the judgment. In the senses of hearing and sight, when these senses are cultivated, we have the conditions of extended and sound inference, and the generality and harmony of these inferences imply, if not the identity in different persons of the sensational data involved, at least a uniformity of data in the same person, which has much the same value, as a term of knowledge, as would a wider agreement.

There is a great diversity among men in the perception of sound as a vehicle of emotion in music, and very little difference, aside from that which attends on cultivation, in the perception of sound as the vehicles of ideas. The disagreements in human knowledge are due only in a small degree to a disagreement in the senses, save as that diver-

sity is an expression of inexperience or of indolence in their use. The most remarkable case of deep-seated and unexpected relativity in the senses is that of color-blindness. Only the most careful inquiry can discern its extent, or the relations it may have to some abnormal form or state of the eye. The eye, by the very complexity and exactness of its construction, is especially liable to defect or excess in some direction. One may have the appearance of being color-blind when he is not, simply from carelessness in discrimination, or from an inability to express correctly the differences which he discerns.

While there is a large range of diversity in the actions of the senses, due in some degree to the senses themselves, and far more to the variety in the conditions of their action, it is observable that this fact affects their value but slightly as giving us terms of knowledge. Generality is in no case a product of the senses; speciality, a rendering of the variable forms under which truth expresses itself, is their function. Here is seen a great weakness of empirical philosophy. There is no generalization in a simple repetition of sensations. These impressions are hopelessly and unceasingly changeable. The successive photographs of a single object, taken apparently under the same circumstances, are still distinguishable. The events of the world, contemplated by the senses, are in obvious and rapid flow. A diversity which, with its quick transitions, never returns into itself is the one persistent, sensational fact. Out of such an experience no general truths, no laws, no principles, can be deposited by simple reiteration. There is no reiteration. There can be no rut, for the wheels of time do not pass twice over the same road. A single sentiment, written in a dozen forms, in a dozen different hands, cannot, by simple

superposition, make to the eye one legible and general impression. The senses are persistently variable, and cannot be the exclusive and sufficient ground of any thing, even proximately, absolute. The absolute is reached through them, not in them. Indeed, the most exact repetition of sensations could not give it; it lies far deeper than the sensations it interprets.

The lines of argument in experience, its terms of universality, are found in the laws of change, and in the manner in which these laws are expressed. The two things are inseparable. The laws of nature imply qualitative and quantitative relations which are adhered to in all changes. Herein is the permanence of the world. Even from those who insist, in the most unwarrantable way, on the relativity of knowledge, we hear much of the generality of law, its immense sweep and fixed character. The two assertions are not consistent. The absolute and the universal are essentially the same; we attain the one as we attain the other.

The speciality of the senses does not cut us off from general knowledge so long as the relatively variable and transient expressions put us, as a language, in connection with the forces with which we are dealing in the physical world, and in connection with the laws of transfer between them. This they do very completely. While our observations are frequently not exact and full enough to give us the data for general truth, it does not often occur that we are misled by any impressions peculiar to ourselves. The relativity of the senses is not such as to intervene between us and general knowledge, as science abundantly shows. Astronomy proceeds very easily and very positively, though the images of suns, planets, satellites, are not identical as received through different instru-



ments and by different observers. The higher powers, in their absolute quality, enable us to escape the lower ones in their relativity. This relativity is chiefly in the facts themselves, and is a portion of what we need to know in their apprehension. We are not dealing with the fluctuating effects of fixed things, but of fluctuating things. It is enough if our senses give us the data of sound judgments and general truths,—and this they certainly do. The generality of the general finds meaning and contrast in the variability of the variable. Sensation, as a term of knowledge, plays its part successfully, and constantly issues in propositions of the widest scope. We disparage our knowledge as relative, not so much from any weakness we have found in it, as from our theory concerning it. We are to look to our senses chiefly for that fundamental element in all intellectual construction, diversity.

The division which has so constantly reappeared in philosophy between the primary and secondary qualities of matter, has virtually been an effort to find the absolute and the universal in the senses. The primary qualities have been thought to disclose themselves habitually, necessarily, in the senses, as contrasted with secondary qualities. The truth would seem to be that in the qualities of things there are variable degrees of generality, that these qualities express narrower or broader relations, but that they all rest on experience in the same way, and are to be interpreted in the same way by it. We can say of no one of these qualities as contrasted with other qualities, it is primary, necessary, absolute. The data of knowledge given in the senses are relative, relative to the passing conditions of a system of things in unceasing flow. This relativity is the result primarily of a change of circumstances in the things themselves, and in

the recipients of the impressions made by them, and secondarily of variability in the organs of intercommunication. This relativity is for the most part the necessary expression of leading features in the facts themselves, and interferes neither with the scope nor generality of our knowledge. It introduces an element of relativity into human thought, but one that enhances rather than limits its value. A general acceptance of primary qualities is not only a testimony in favor of the absolute, but a transference of it to the senses, where assuredly it cannot be found.

It is not unreasonable to suppose, though the supposition has no direct proof, that other senses are possible than those which belong to man; that matter may influence mind in other ways, as well as in other degrees, than those now known to us. The fact that the same sense in different forms of life has a different range, implies unknown possibilities in this direction; while the absence of one or another sense in animals and in unfortunate persons, indicates that we are dealing with no charmed circle of a fixed number of terms. It is possible that there may be senses as much transcending sight and hearing as these surpass touch and smell. It is not probable that such senses would render the revelations of the eye and the ear useless, any more than these now displace the inferior senses.

We summarize the part played by relativity in the senses in four propositions.

(1) We require for knowledge both the particular and the general. The senses give us the one, and the conditions of the other.

(2) We are rarely balked in the generality of our conclusion by the particularity of our sensations. Knowledge becomes at once easily and safely general.

(3) It is not necessary that sensations in different persons should exactly correspond in order to become the terms of general truths to each of them ; any more than it is necessary that the pronunciation of words should be the same as a condition of apprehending the truths they express.

(4) A fundamental oneness of results in sensation is rendered highly probable by the fact that all men possess their organs of sense and the accompanying mental powers as common terms in one genetic process of evolution.

The second source of knowledge in man, and one in which his personality and power are especially concentrated, is the understanding. The mode of action which is preëminent in the understanding, is the judgment ; and successive steps of judgment are reasoning. The free, active centre in mind, its present point of direction and construction, is found in the judgment. The inquiry is, therefore, of corresponding importance : How far is the process of reasoning a relative one, sharing the peculiarities of the individual ; and how far a general one, the same for all ? In what sense is it true, that " to think is to condition " ? When we reach mind, acting as mind in this its preëminent power of judgment, it seems to have the same relation to the truth, that a perfectly transparent body has to the light ; it offers to it no obstructions, and puts upon it no conditions. It is simply a medium. Carbon, in carbonic-acid gas, gives a new reaction to oxygen, and the product owes its properties to both terms. Not thus is it in the reception of truth. The sound judgment is not a midway product between two agents. It is the perception by mind, as a pure intellectual power, of certain truths. The logical process is identical in all minds, and logical conclusions are true for all persons. That spiritual

power which we call mind shows no diversity of law in different persons, and no variety of method. There can it, notwithstanding the diversity of premises, an element as absolute as any element can be, indeed an element in connection with which the notion of the absolute arises. The relentlessness of logic is a superlative fact in our experience. There is in it no fluctuation, no relativity.

Notwithstanding the uniform nature of the logical process, the conclusions of reasoning show much variety for many reasons; none of which, however, are inconsistent with the present assertion, that the laws of reason are as universal as reason itself. The mind may fail to reach the truth in its conclusions, because of the erroneous or the partial data with which it starts. The certainty which attends on the laws of development may be of no avail, because of the character of the premises with which the movement commences. The relative character of a sensuous experience may reappear in the general truth it is made to sustain. The mind also, in the use of its powers, depends on discipline. The steps of reasoning may be short, hesitating, false, because of the feebleness of unsustained powers. Fatigue, moreover, affects the reasoning power as it affects other powers. The feeling also greatly modifies the judgment, not by shutting the dependence of premises and conclusions, but by so directing the attention as greatly to alter the light that falls on the facts presented to the mind for its consideration. In various ways, therefore, a transient obscurity may overtake our convictions, as mists and clouds may be present in the atmosphere, permeated though it may be with light. In spite, therefore, of the complete correctness or error of any given syllogism, the opinions which men entertain on many subjects have obscure elements of relativity, whose

elimination attends on intellectual and moral culture. Yet the absolute in reasoning is always rising out of and above the relative, and so allures and satisfies the mind, that men rarely lose heart in the pursuit of truth, or settle back into pervasive and chronic scepticism. If the personal factors in judgment overshadowed and vitiated the universal ones, the weariness of useless effort would, sooner or later, overtake us all. We are saved from this by our trust in the integrity, the universality of the processes of reasoning. A sound argument is good to all intelligences for all that it proves, and may carry with it absolute certainty. Often and in many directions the conditions of perfect proof are met, and we have a body of exact knowledge. The mind of man is held firm by the large field of the exact sciences, in which many indisputable truths rise into the clear light of reason, beyond all atmospheric changes. Skirting this region of exact knowledge, there is a large area of truths which meet the tests of experience, and serve all the purposes of absolute knowledge. Practical men, especially, never lose faith in the universal element. Scepticism, nihilism, are the products of theoretical minds, whose attention is directed more to erroneous judgments than to sound ones, to their own private speculations than to general convictions, and who demand unity and uniformity of conclusions in directions in which they are not attainable.

We may fairly affirm that the logical process is common to all minds, is absolute within itself, and that, in spite of the nature of the material on which it is often exercised, and the feeble way in which its work is done, it issues in many universal truths. Though the instrument we use must be carefully focused, when it is well handled, its definition is clear and trustworthy. There is a large

number of judgments on a great variety of subjects, which fully meet the tests of consistency and universality, and have every claim to be termed absolute knowledge, since knowledge only means these assertions of the universal reason, whose type is the reason of man. If we undertake to deny this universality, our denial, as a general truth, perishes within itself. It cannot retain its own generality in denial of the generality of other propositions much more obvious than itself. There is no philosophy so addicted to suicide as empiricism.

A third form of mental activity, that of the reason, as the highest insight of mind, is most of all free from limitations. Reason stands for those final, penetrative interpretations by which all things become comprehensible. Language implies a power of thought in both writer and reader, speaker and listener. It is not language on any other condition, but mere characters, mere sounds. Intelligible things imply intelligible relations, both in their construction and apprehension. Reason is that act of mind which supplies the necessary conditions of comprehension. While reasoning is the central, voluntary activity of mind, the condition of this activity is the possession of reason, the power to grasp those relations under which reasoning proceeds. Every judgment predicates a relation, and every relation involves an interpreting idea. We may affirm that one thing is nearer than another, or one event is more recent than another. The one assertion implies space, the other time. Till these notions are present these judgments cannot be made. An antecedent condition of every judgment is the idea or ideas explanatory of the relations affirmed in it. The power to discern the appropriate ideas is the fundamental characteristic of intelligence, is reason. The service to

which they are at once put is that of giving the grounds of judgments. A sensation as a sensation is complete within itself; or, if it lacks completeness, must be completed by the organ of sense. As a sensation it may remain indefinitely in consciousness. It gives occasion to the activity of higher powers, if these are present, but it does not confer them. If sensations are to be put in definite relations by the judgment, the work must be done in connection with appropriate ideas. Mind, as rational, will discern and apply the ideas pertaining to the problem before it, precisely as an intelligent reader finds in a poem the thought of the poet. Judgment is so great a power, because it weaves together the otherwise disparate data of the senses by means of the rational relations which are discerned in them. Things and ideas are terms of knowledge. Wise judgments are knowledge itself.

Endless discussion is had as to the origin of these rationalizing ideas, but how can they otherwise arise than as the products of reason. They must, for the uses they subserve, address the mind, and be employed by it. Without them mind is not mind, and loses its distinguishing functions. We might as well say that sensations are not in sensitive beings, but in the object of sensation, as to say that ideas are not in the mind, but in the objects with which it is dealing. The only possible question here seems to be, the kind and degree of activity in the mind in reaching these ideas. But the more we reflect upon the subject, the more we shall see that activity and passivity mean far less as terms of separation than they at first seem to. The feelings give the best examples of states relatively passive. But the power to feel, the power consciously to entertain any given impression, is a most peculiar and primitive endowment. It belongs to

the nature of the being whose it is, and not to the objects which give occasion to it. A feeling is a reaction under an action, but one determined in its characteristics by the person affected. As the power of sight is a power of mind directed toward external things, so is the power to comprehend what we see a power of reason, conditioned on the presence of the objects before us. If the occasion and the action both lie in the things, reason plays no part in the rationalizing process. Plainly the explanatory ideas are not a portion of the sensations which they expound. If they were, sensational powers would give complete knowledge within themselves. The judgment is present on purpose to complete sensations in knowledge by uniting them under the relations which are suggested by them to reason as reason.

Take such an idea as that of resemblance, involving agreement and disagreement, how can any repetition of unlike things in perpetual flux, as a simple physical fact, include this idea? The mechanical images we bring forward to illustrate this subject fail of their purpose. If a die were applied, stroke after stroke, with constant, though slight changes, absolute confusion of impression would be the result. The only possible way in which the mind gains the terms of a judgment in agreement is by an act of comparison, a movement between two sensations each distinctly considered; a movement guided by a definite idea of likeness in some particular. Till the notion is present, the rational activity under it cannot be set up; and till it is set up, the activity present is solely one of sensation. Sensation is not reason, nor can it evoke reason save in a rational being. That it does call out reason in man, is the fact on account of which we term him man, and not a receptive sensorium. Passing



the endless controversy with its assertion on the one side, that all things, as a condition of unity, must be one and the same thing; and its affirmation, on the other, of diversity and agreement as the eternal correlatives in unity, we inquire, how far rational ideas, the first conditions of knowledge howsoever reached, are relative?

Those who hold that the constructive ideas of reason are the product of primitive powers, regard them as the necessary and the universal characteristics of a rational being. Necessity and universality are the tests of these ideas. It is these distinctive features in them that the empiricist tries to explain by descent. These ideas are, therefore, at least within the circuit of rational creatures, absolute. The forms of philosophy recognize the independence of these ideas of any personal experience which arises under them. Their primitive character within the sphere of human knowledge is accepted.

Strangely enough another opinion has arisen by which a relativity is assigned these conceptions, not within the circle of experience and the race of men, but in reference to some imaginary experience or powers outside of human knowledge. These constructive ideas are regarded by Kant as form-elements, which belong to the mind, and which the mind in its activity puts upon the objects contemplated, without reference to their real nature. This view, having accepted the universality of the notions which guide the human mind, suddenly sinks from this high position into the most complete and hopeless relativity in reference to the rational powers themselves. These are of so purely a subjective character that nothing can be affirmed by means of them as to the nature of things, or as to a universal knowledge lying outside the conceptions of men. The complete, though comprehensive, relativity in

which this philosophy is at length landed, after having stanchly affirmed the *a-priori* elements of experience, is a flagrant example of a speculation that strives, in a futile and unwarrantable way, to find something back of first principles, and helps itself forward in its labor by vague and inapplicable images of the imagination. In a sense like sight, we habilitate the external world in glowing colors, which, as colors, have no objective existence. Color is the subjective effect of objective causes, working their results on the mind through organs of sense. This synthesis we forget in perception, and refer the color outward to its immediate source. Thus the senses transform the objects of sense in the process of presenting them.

Reason is made to do a like work far more completely. It, too, in this philosophy is made to carry conditions with it, which it puts upon the things contemplated in so thorough-going a way, that we can affirm nothing whatever of things-in-themselves, but must satisfy ourselves with impressions which the mind has concerning them, and which are due to its own formation. Reason, instead of being less relative than the senses, is far more so, is completely so; and instead of conferring a knowledge of things, cuts us off from all possibility of attaining it. The relativity of the senses enters by means of a sense organ; but this relativity is found in the very nature of mind, by which it becomes an instrument not so much of reflecting things, as of putting on them its own distortions. We are not viewing the landscape through plain and transparent glass, but through a twisted and colored medium. Our instrument of knowledge is a kaleidoscope; and we have no way of comparing its combinations with its initial elements.

This opinion is one of great intrinsic improbability, and

is wholly without proof. It is opposed to general conviction, to our very conception of what knowledge is. Knowing things is not distorting them, is not putting impressions for facts with no apprehension of their relations to each other. The fundamental conviction concerning a knowing power is that it is one which apprehends things as they are, and not one that fastens on them relations that may in no way belong to them. We classify our sensations among our feelings for the very reason that we recognize in them a strong subjective element, though the grounds of this emotional state are in the external world. Sensations become perceptions, knowledge, by shaking off personal relations, and acquiring general and objective ones.

No action should be more pure, more rid of subjective limitations, than one of knowing; and so it seems to be in experience. He best inquires who inquires with least reference to personal conditions. What is the probability of the existence of this intense modality in the knowing mind, by which it forces itself over and over again on all that it knows, and so separates itself forever from what it seems to know? If this is the great characteristic of mind, it is least of all a knowing power. The knowing process is wholly subverted, or, which is the same thing, entirely altered from our conception of it. We can have no rational interest in inquiring into the nature of knowledge of this order, for our very conception arising under the inquiry can be no more correct than the knowledge itself. That conception will simply be an unfounded impression about unfounded impressions.

And by what right do we infer a possible territory of knowledge outside of human knowledge, and standing on no terms of intercommunication with it? Nothing can

suggest to us such a field, and nothing can interpret it to us when suggested. There are no known facts which call for it. If we concede it, it can play no known part in the sum of human knowledge. And by what warrant do we call that knowledge, which is, in some unknown way, utterly other than human knowledge, our initial term in knowledge? Why does this hallucination of absolute knowledge hang about us, when, according to the present view, we have not so much as a foretaste of it? If such a realm exists, it exists in no fellowship with that which we term truth. Why should we regard a more profound penetration into the nature of things, if there be such a penetration, as knowledge, when knowledge with us means the reverse of this, the putting upon things our own personal impressions? The conception of a higher knowledge, of a distinct order, is at once gratuitous, and contradictory to our interpreting terms. Either that which we know is not knowledge, or that which from its very nature we cannot know, is not knowledge. Knowledge must be consistent and concurrent with itself. If it were not for the broadly speculative and profoundly spiritual nature of man, by which he insists on citizenship, in the universe of mind, a relativity of this order would have very little interest for him, as it leaves him the entire range of his race conceptions. This does not, however, satisfy his earnest thought. It is not a universe of his own, but the one universe he wishes to possess. He desires the liberty of the city, the freedom of the entire circuit of being. If he is imprisoned by his own processes, and not enlarged by them, these processes become odious to him. Yet it is most plain that he can never use thoughts of this relative order as a ladder by means of which to climb into a higher, purer region. In-

deed the mere notion of such a realm is as a fact inexplicable, if there is nothing absolute in thought.

The doctrine of Kant, the deepest refuge of relativity, gives rise to the notion of things-in-themselves, mind-in-itself, as lying beyond the range of our powers. There is a phenomenal world in which we move, and there is a more real and permanent world to which we have no access. These unknown forms of being, of which our sensations and thoughts are such remote and relative expressions, as to give us no terms of intercourse, are wholly inaccessible. "Whatever we know," says Hamilton, "is not known as it is, but only as it seems to us to be. However great and infinite and various may be the universe and its contents, these are known to us not as they exist, but as our mind is capable of knowing them." Our knowledge is thus lifted from the region of substances into that of phenomena, from realities into appearances, and these appearances are made to depend for their form on ourselves. Constructive ideas are mental forms simply; sensations are organic impressions simply, and so the world of things lies hidden far below us, beneath the shifting clouds and mists of the ærial region in which we are afloat. We may fly, like Noah's dove, hither and thither over this endless expanse, and still find no place to plant our feet. Indeed, feet in the intellectual world have no longer any service, and are replaced by the wings of fancy, on which the minds of men hang, like gulls forever hovering over the restless waters below them.

The notion of things-in-themselves arises from the view of Kant that fundamental ideas are only mental forms put upon the objects of consideration, and serve, therefore, rather to hide than to disclose those objects. Our knowledge leaves things where it finds them, with unknown attri-

butes enclosed in an impenetrable medium of appearances. No conception is more destructive of final, sufficient knowledge than this of Kant, and the surprising thing in connection with it is, that the idea of knowledge still remains in full force when the very breath of its life has been struck out of it. An ignorance of this order of things-in-themselves would be perfectly hopeless. No multiplication of sensations and perceptions, no new methods of approach by rational ideas, would in the least avail to remove it, as each process is unable to penetrate its own subjective illusions. The sane man stands in reference to the world of facts, if there be such a world, as does the insane man in reference to passing events; they conform, all of them, to his furtive impressions.

This notion of things-in-themselves, the inscrutable core of the world, is altogether vicious. We not only have no knowledge of the imaginary properties of things-in-themselves, we have no data from which to infer their existence. Under the notion of cause and effect, causes are so measured by and expressed in the effects as to offer no residuum of unexpounded being. We have no right to ascribe more to them than they manifest. In knowing effects we know causes; and if we know the entire circle of effects, we know the entire contents of the causes. To surround causes with another series of effects of an inscrutable order, is a gratuitous work of the imagination, is to repeat the empirical wisdom of the savage who explained the steam-engine by the assertion that it enclosed a horse; or is to reproduce the method of Darwin when he expounds the inscrutable organizations of living things by gemmules yet more inscrutable. To be sure, we do not know, and can never know, the entire circle of phenomena which any given substance may manifest, but so far as we

do know them we know the substance which is expressed in them. Were it not for these properties we should have no occasion for any substance. No new properties alter our relation to this substance, and substance, save as the basis of properties, has no reason of being. Kant's things-in-themselves are fanciful creations for which no warrant of any kind can be produced. Yet they took firm possession of his own mind, because they offered the means of maintaining an absolute, after all traces of it had been swept away, in human knowledge. Our convictions will be of this perplexed and double order so long as we put beneath our phenomenal experience an unknowable substratum which has some other method of existence and form of manifestation than those by which it is declared to us. Substances, forms, are known in the degree in which properties, activities, are known. If we deny an absolute in a legitimate form, we shall re-introduce it in a surreptitious one.

Theology has helped forward this obscurity by the mystery with which it has enveloped the being and presence of God. It has often denied in reference to God time, space, the categories of reason. If this is a just procedure, God is so far irrational, since reason, without the categories of reason, can mean nothing. Moving in this direction spontaneity, truth, right, have no application to God, and in striving to lift him above the world of light, we have lost him in the void beyond; he has become to us the Unknown, and we cannot wisely say whether he has risen or sunk in the wealth of being. All we know certainly is, the conception is no longer within our intellectual horizon, and as wise and rational beings we can have nothing more to do with it. The true mystery of God lies in the prodigality of revelations, in the multi-

plicity of the visible as well as of the invisible. He dwells in the light, and it is the light that is inapproachable. It is a reverence less than reverential that refuses to see by the light, or to rejoice in it as light.

If God exists in some wholly inscrutable way, outside of the realm of reason, we can bring no proof from within that realm for his existence. What rational things prove are rational sources, not irrational ones. What the mind calls for is Reason, that may abide at the very centre of the rational universe, and be to it its spiritual pulsation. What God is other than this or more than this is of no interest to us, and we have no data from which to make any affirmation concerning a fact of this order. Proof is rational in every fibre of it, and if we conjure up an irrational or unrational being, we lose at once all rational hold upon him. The transcendent categories of the reason as that of causation, spontaneity, the infinite, find their basis in experience. They enable us to transcend experience, they do not enable us to contradict or to dispense with it. We see the soul of a man in his eye; we see it and we do not see it. What we see is the footing from which reason starts, the ground from which it springs. Reason cannot advance without experience, nor yet is it bound down to it. Reason can set the Infinite over against the finite, precisely as it can put the spirit of man over against his words and actions.

The relative character of the forms of reason has been urged by Helmholtz, in connection with the axioms of mathematics, the stronghold of absolute truth. Two straight lines can intersect each other but once, so says the insight of reason. No straight line can return into itself. But if we define a straight line as the shortest distance between two points, then we may suppose a person,



says Helmholtz, whose experience is confined to the surface of a sphere, to whom these two assertions of our plane geometry would be untrue. Great circles, through the continuations of lines which are the shortest distances between two points on the sphere, intersect each other twice, and each circle returns into itself. The answer is obvious. No experience can arise on the surface of a sphere, because the surface of a sphere is an abstraction. We might as well speak of an experience taking place in the pure notion of being, and so destitute of form. There can be no space of two dimensions any more than of four dimensions. Surface is not space, it is one of the relations or abstractions incident to it. We may make the abstraction in dealing with abstract questions, but we cannot suppose a concrete experience to take place in an abstraction, on a surface, for all the conditions of an experience are wanting. Such an experience could not understand even the nature of the surface to which it was confined; if it did, it would know it to be a curved surface, and arcs would no longer be straight lines. Mathematicians may, for certain purposes, assume a fourth dimension in space, but the supposition no more expresses a fact, than do the initial terms of a series express an infinite series.

The absolute nature of the results of reason has all the intrinsic probability which can belong to any knowledge. It is affirmed directly by reason in the very gift of these notions. Axioms and self-evident truths mean this, or they mean nothing to any purpose. The opposite assertion is the erratic product of speculation; is wanting proof within itself, and lacks the universality of sound knowledge. This view also receives all the confirmation that experience can bring to it. We never find these first principles at fault. In the absence of all opposing proof,

we have the most indubitable right to affirm that knowledge is knowledge. To deny its present ostensible character is so far to undermine truth itself as to render its speculative restoration in the eternal verity of things wholly fanciful. Such a conception is only a deeper impress of the same misleading forms of thought. We should simply be fated to think of an evanescent absolute, a thing in itself most alien to our experience. On the other hand, that we think of the absolute is the strongest proof that our thoughts reach to it.

Dr. Hickok has well shown that no common experience is possible under the illusion of personal forms of thought, which stand in no definite dependence on things. Our conjunct experience must take place in one time, and in one space. The time and the space must express to each of us real objective form, and carry with them common relations. When time and space are mental forms merely, as in dreams, our experiences lie wholly apart. The assumption of the unity and oneness of these forms of reason among men, while they are completely relative in reference to men as a genus, is a marvellous example of a bastard absolute, of an affirmation of falsehood and faith in the same breath.

The one thing knowledge is never at liberty to do, is to destroy itself. Reason may never impeach reason. Beyond the faith of reason in itself we cannot go. Knowledge holds within itself both elements, the relative and the absolute, the empirical and the transcendental; in the deepest meaning of the words, the natural and the supernatural. Our senses furnish the one term and our reason the other, and the two interwoven in judgments, yield knowledge. Knowledge cannot be made out of sensations; it cannot be made out of ideas. The web of

thought is a web by virtue of combining them both. Thus facts and theories unite as knowledge in science.

To think, then, is to condition in this sense only; correct thought springs up in discernment of the relations which ever belong to things as the products of reason. A trust in reason demands a recognition of its movement toward the absolute; human experience has nothing to offer against an absolute, while it constantly gives rise to the idea; an absolute beyond thought, with no absolute in thought, is unintelligible; a scepticism of reason of this fundamental order, directed toward itself, is suicidal.

The relative always involves for the mind the absolute. I say that one thing, as a hand ball, is larger than another thing, as an acorn. I may then proceed to say, that the words large and small are always relative. Yes, but I regard the relation of the ball and the acorn as absolute within itself, otherwise my words would have no meaning. If the relation can change independently of the facts, the assertion is lost. When the mind lifts the absolute from one point, it plants it at once at another.

### III.

#### SPONTANEITY AND CAUSATION.

No discussion is more important, and hence none is intrinsically more interesting, than that of the nature of the connection between mental facts, between physical facts, and between the two sets of facts respectively. There is not such another division in our experience on the face of things as that which exists between mental phenomena and physical phenomena. Are the laws operative in the two realms as diverse as are the facts which they govern? Men have wearied themselves with answering this question, and have never reached an answer which satisfied them in any considerable numbers for any considerable period of time. This state of the case sufficiently shows that no presentation of the connections of matter and of the connections of mind has entirely corresponded to the convictions which are arising in our daily experience concerning them. We are to make one more effort at clear and sufficient statement; and we ought none of us to be impatient of such labors, for by means of them it is that the discrepancies between our theories of life and the facts of life are slowly removed, and an increasing union is effected between the different terms of knowledge.

In most discussions, we soon leave our premises behind us, and move freely along familiar paths of reasoning. In this pursuit of truth, our logical faculties find common

ground, and we are interested and satisfied because our method does not seem to be one of assertion, but one of proof. This contentment is indeed often deceptive, but it is none the less for the time being real. When we approach an abstract and primitive theme, like this of the ultimate connections between the several sorts of facts which make up knowledge, these secondary processes of ratiocination fail us, and what we have to offer presents itself as a series of unsustained assertions. This difficulty is fundamental, and cannot be entirely escaped. The proof, so far as there is proof on so underivative a topic, is allied to that of superposition in mathematics. We are convinced by a visible correspondence between two things; in the case before us, between our statements in their coherence and the ultimate facts of mind and matter as our experience presents them to us. Every degree of satisfaction and dissatisfaction is likely to attend on this process, according as our familiar convictions move with or diverge from the method employed. We offer what we have to say as coherent presentation, or assertion if you will, yet asking a distinct recognition of the fact, that such presentation may pass, under the insight of any mind, into the highest proof— to wit, the visible correspondence of a proposition with that which it purports to cover in our experience. I shall not feel, therefore, bound to add ever and anon little scraps of reasoning, as if these constituted the strength of my statement. Its authority, if authority it has, lies far deeper than this method would imply.

We propose to consider the nature of mental connections, and of physical connections, their relation to each other, the authority which attaches to these ultimate interpretations by the mind of the dependences of things

and actions, and the language in which these ideas are expressed.

Pure mental facts, mental facts of the highest and most characteristic order, as those of thought, we believe to be united by a spontaneous act of mind. This idea of spontaneity is so simple, primitive, and intelligible within itself, as to call for and to admit of but little exposition. Spontaneous action is antithetical to causative action. It implies a power to originate an effort, and to bring it to an end. The constant rise and subsidence of acts of mind within the mind itself, subject simply to its own impulses, is expressed, in its underlying nature, by the notion of spontaneity. Causation unites an event in the closest relations of dependence with those which precede it and those which follow it; spontaneity so far relaxes this connection, that the spontaneous act may or may not arise; or, arising, may reach one or another result. Both the energy and the direction of an act of thought are the expression of variable powers, and not of fixed forces; imply potentiality, not actuality; are originated, and not transferred. While the mind does not assign itself its external or extraneous conditions, it does determine its own action, by its own laws, under those conditions. This is the fundamental fact in personality. Our thoughts, feelings, and volitions come into being and go out of being with no forces to go before them, pass through them, or follow after them. A thought is an act and an act only; it arises within itself and ends within itself; it is, in a measure, absolute; it springs from no previous fact and contains no subsequent one. A spiritual product and a spiritual universe may pass away and leave not a wrack behind.

These variable powers of mind are not, it is true, with-

out laws ; but these laws are not laws of things, laws of forces realized in quality and quantity, but laws of mind, laws of logic, laws of art, laws of virtue. These laws are laws in another sense and in another method from the sense and method which attach to physical laws. Physical laws are interior to the permanent forces concerned in them ; mental laws are exterior—at least in a figurative sense—to the variable powers that are to be governed by them. A discernment of the spiritual law precedes its application and comes in to determine our degree of conformity to it. A law of this sort, that must be seen in order to be obeyed, demands spontaneity, since it offers itself to the pursuit of the person who is to profit by obedience. Without spontaneity it cannot be obeyed ; it must become automatic in the forces involved in it or fail altogether.

At this point also we can best see the nature of the notion of final cause. With much deference to the conclusions of so able a writer as Janet, we must still think that the notion of a final cause has the same necessary footing in human thought as that of a cause. In causation, phenomena stand to the mind for forces ; in the activity of mind a series of efforts indicate a motive which has guided them. The underlying relation of this motive is as much a matter of insight, interpretation, as the presence of forces in physical facts.

Take the simple case of a mathematical inquiry, the solution of a problem. The mind must be spontaneous in its action, free to move as insight and changing insight may dictate. The motive which prompts the movement, the desire to solve the problem, is present to the mind. What is the relation of the motive to the activity under the motive ? The accompanying states of consciousness

do not answer this inquiry, for it bears on their sub-phenomenal dependence. Interpretation here is as truly and exclusively an act of insight as in the case of physical phenomena. The spontaneity which final causes demand is recognized and supplied as the result of rational comprehension. In it is the gist of the distinction between causes and final causes.

The laws of logic are laws which guide the mind's action in the pursuit of truth; they pertain not to every use but to the right use of powers. They are not necessarily obeyed by any one mind in any one act. They are laws in this sense only, that they must be obeyed if our conclusions are to be correct; but our conclusions may very easily be incorrect. There are here stringency and necessity; but they pertain not to the actions of the mind, but to the conditions of successful action. They are a stringency and a necessity to which the reason subjects itself by its own effort.

The laws of the intellectual feelings indicate the dependence of the emotions on the mental states that call them out. Here are conditions and connections which the mind cannot alter, but it may so alter its action under them as greatly to vary the results. One cannot fail to feel anger or sympathy or love under certain circumstances, interior and exterior; but he can greatly alter the force of these feelings, or escape them altogether by modifying the circumstances on which they depend. He can form habits of thought which will deaden the affections, and inflame the passions; or he may, by reversed action, nourish the affections and mollify the passions. The laws of the sensibilities are not inevitable laws, laws so interlocked with other laws that their conditions and connections are held fast in one eternal process.



The laws of rational action, of right action, are even more manifestly of this external and variable character; laws that may be obeyed and not laws that must be obeyed. They define dependences which we cannot alter, but to which we may or may not conform our conduct. We also, by our action, constantly modify the circumstances that give immediate form to these laws, and so modify the laws themselves. All these laws, laws of thought, laws of feeling, laws of action, imply spontaneity, powers that play with the law, enter into it, fall short of it, pursue it, neglect it, stand in every relation to it, save that of fixed and perfect obedience. This spiritual life, which rises into the region of law by its own apprehension, and follows a path of obedience or disobedience under modifiable impulses referable to it self, is possessed of spontaneity, a spontaneity which does not set aside law, but deals with it and dallies with it in all ways of resistance and concession. Our daily experience is constantly expounded, and can only be expounded, in the aspects which it bears to us who participate in it, by this notion of spontaneity. The laws of association may be made to take the place of primary spiritual powers, but, in doing this, thoughts and feelings are treated as permanent entities with fixed affinities. Yet thoughts and feelings have no existence aside from those mental powers of which they are momentary expressions. Thoughts and feelings can have no qualities and sustain no relations which are not imparted to them by the powers that give them birth. A thought does not remain with fixed affinities to command other thoughts, after the mind has ceased to think it.

The thoughts are the immediate products of the mind; they owe their force to the insight of reason. It is reason

that rules the products of reason : reason giving a law to its own action, not receiving a law from it. Intellectual and spiritual feelings are also indirectly dependent on the action of the mind, and are momentarily modified by it. We cannot at any one time look upon the mind as a fixed term, and upon thoughts and feelings as fixed terms in reference to it, and so calculate the results that are to follow the combination. Even in the instant of temptation a little thought may change the force of the feelings, and sweep results before the reason. We mislead ourselves by making thoughts and feelings independent entities in reference to mind, and charged with certain forces over it. If we have two unchangeable terms of action, we may well have uniform results ; but the mind is not such a term. Its spontaneity gives it endless variation within itself, and under its own laws is a sufficient reason for very diverse issues.

Causation, as interpreted by the physical world, is the reverse of all this. By causes we understand those efficient forces which underlie and sustain physical phenomena. This notion is the foundation of the division into phenomena and noumena ; that which appears in the senses, and that which is the ground of these appearances. The phenomena find entrance to the mind through the senses, the noumena find admission by the rational interpretation of that which is present in the senses. A movement inward reaches the mind as spiritual noumenon, a comprehending movement outward, reaches physical noumena, substances, forces, cause, the inner core of phenomena, the external world.

The cause, in the strict use of the word, is co-equal and co-etaneous with the effect, and is directly involved in it, in the same way as the surface of a body implies the

substance beneath it. Causes, underlying energies, are present in effects, and are precisely and fully expressed by the effects. The two are diverse aspects of the same fact, as regarded respectively by the senses and the understanding; what to the senses are phenomena, are to the understanding, by the interpretation of reason, noumena, substances, realities, forces.

It follows from this that the noumena, though differently known, are as completely known as phenomena, since the phenomena both express them and measure them to the mind. The noumena are nothing more than the very forces which are fully declared in the phenomena. The phenomena measure them in the same way that they measure the phenomena. The tendency we have to struggle after a farther knowledge of noumena, things-in-themselves, than that contained in the circle of phenomena referable to them, arises from the precocity of the imagination. Imagination works under the forms of the senses, is busy in bearing about with us phenomenal images, and so deepens the impressions which phenomena make upon us. If sense-impressions were completely lost by the mind the moment the sense-organs were diverted, things and facts would have for us a much more remote and unreal character than now belongs to them. This action of the imagination, which keeps the highways of the senses well travelled and familiar, can do nothing to aid us in the apprehension of substances, forces, causes. This fact makes them seem peculiarly remote to us; and we strive, by an effort of the imagination, to put still other phenomena under phenomena in a continuous series, so that substances and forces themselves come to stand for additional imaginable phenomena, instead of for the rational terms which accom-

pany phenomena. Thus we have a material core of physical things made up of a second series of properties. This creation is an illusion of the imagination. Causes, forces, substances, are lodged in the reason, and must be left there. The test, the conceivable and the inconceivable, as applied to them, is no better than that of the visible and the invisible.

Language is chiefly shaped by practical ends, and by convenience of expression in reference to them. This fact has obscured the subject of causation in two respects. Effects, not causes, meet the eye as we see the surface of a stream and not the waters which compose it. Hence we designate causes by the effects which manifest them. The powder which splits the rock is present to the imagination as a black, granular substance. There is a steady succession of phenomena, and a firm coherent succession of forces which sustain these phenomena. We deal in sensation, and chiefly in language, with appearances simply, and through them, by virtue of the penetration of the reason, we reach the energies expressed in them. Our language is chiefly a language of phenomena, and is always supported in thought by the phenomenal presentations of the imagination. As a consequence of this, the inner links of reason lose in our thoughts a portion of the strength which belongs to them.

Moreover, the most immediate causes, those which are present in the phenomena before us, have for us less practical value than more remote ones, as having usually gotten beyond our control. We are chiefly interested in those manifestations of forces, which, in reference to any desired results that may flow from them, admit of modification. This government of events calls for an anticipation of effects, and a shaping of causes, while still

remote from them. Hence we allow the word cause to attach with energy to any event, no matter how secondary or remote, which, lying in the stream of events, can be used as a means of modifying its direction. Those events which seem to us direct in their influence, we term efficient causes; those which are indirect, we term conditional causes. We have gone so far as to call the motive of an action its final cause; but if that motive is a rational one, it is in no sense of the nature of a cause. A rational motive is no entity which can either furnish a portion of the forces that are to appear in an effect, or can in any way modify them. The efficient causes of an event are the plexus of forces expressed in it; the conditional causes of an event are those farther forces which help or have helped to determine the presence and action of these efficient energies. It may not always be possible to distinguish these two, since the relations of forces are far too subtle and complex for our complete determination.

Says Janet: "We admit that the law of causality applies to the soul as well as to the body, and thus we accept a certain determinism." This he proceeds to define as a rational determinism, a determination by ideas. But no two kinds of dependence can be more unlike than the relation between two events, the one causal to the other, and the relation between the action of the mind and the thoughts which accompany it. To designate both of these as a connection of causality must be profoundly misleading. Causes are the fixed antecedent conditions of effects. Reasons accompany rational action, are its product, and change with it. They are the steps by which the mind takes and expresses its own movement. Causes stand in exact equivalence with

effects; reasons are good and bad, sufficient and insufficient, and share momentarily the changeable energy that accompanies them. A man's steps are not the causes of his walking; a man's thoughts are not the causes of his thinking, nor his motives the causes of the movement that gives rise to them, and proceeds to modify itself in and by them.

The simplest axiom of causation is, every effect must have a cause. This axiom calls for a double interpretation in reference to time. It implies that all phenomena are the immediate results of certain forces; that the visible accompanies and expresses the invisible. We thus arrive at the noumena, the external world of substances and forces. But present existences demand also, under this notion, a farther reference to existence, that have gone before them. The forces that now occupy attention are the expression of previous forces. We are thus led by the notion of causation, from appearances to realities, and from present being to continuous being in the past and in the future.

This axiom of causation gives us the perpetuity of nature. By nature we mean that combination of forces which make up the world, and which have already disclosed themselves in their properties and laws. Nature, looked at by itself and within itself only, must continue to move in the directions already indicated under the laws already disclosed. If the action of physical forces should be altered within themselves, the axiom of causation would be violated. Some cause would fail to express itself in a familiar effect, or some effect would no longer be referable to a pre-existent cause. As causes and effects are exact and permanent correlatives, there are no conditions of change between them, save those already involved in their unfolding.

Causation is the law of forces, and forces are conditioned to space. Space is their formal element and causation their dynamic element. Forces we are using the word in the physical sense we would assign it - have centres, lines, surfaces, spheres of action, and are expressed in extension. Here is one large class of facts, those of the physical world, to be understood in connection with these two ideas. They are defined in the form of their being by space, and in the method of their interaction by causation.

Over against these phenomena, and totally distinct from them, are the facts of mind. The essential nature and the primitive form element of spiritual facts are expressed by the word consciousness. We reach any given fact in consciousness with the same primitive clearness and completeness with which we reach one in space. Neither set of facts can be translated into the other, nor be expressed in language which belongs to the other, except in a remote, figurative way. Space and consciousness divide between them the world of phenomena. There are these two phenomenal forms and these only. They stand over against each other with no points of contact and no intermediate lines of relation. Every effort to find terms of mediation between these two, or a region common to them both, has wholly failed; for there is nothing in our experience to give color or form to any transitional conception. A subconscious state is no more intelligible than a super-spatial one would be, and any facts we may choose to assign it are without any interpreting term in experience. Such fanciful creations we meet with the inquiry: Space we know, and consciousness we know, but what are you? The underlying connection of the facts of mind we have seen to be spontaneity. There is the

same contrast in the dynamical as in the statical relations of the two series of events.

We have next to consider, having defined as distinctly as we were able these two very diverse sets of facts, their relation to each other. That these two forms of phenomena, in spite of their apparent separation, stand on constant terms of interaction, our experience plainly declares. We can be no more certain of any conviction than of this conviction, that material facts modify mental ones, and are in turn modified by them. There are domains not contiguous, nor yet under the same laws, that are united by a constant transfer of influence. — The method of this is inscrutable, as indeed is all method, in its ultimate, unphenomenal nature. The phenomena of matter, on the one side, come to an abrupt end in the phenomenal system, and those of mind, on the other side, rise as abruptly, and neither give any hint of the manner of contact. We make more of this mystery, however, than we have cause to reason to. Like inexplicable fact, include all phenomenal connections, and must underlie them. We have an irrational partiality for sensible relations, when plainly they must, in every instance, come to an end, and be replaced by super-sensible forces and powers. We no more know how the club imparts force to the ball, or how the ball stores up the energy of momentum, than we do how the action of brain initiates that of mind. In fact, it is irrational to ask this question, *How?* with any suggestion of giving it a complete answer. No matter how many and what phenomenal connections are established between certain events, the unphenomenal links still remain of the same inscrutable order. By *inscrutable* in this connection we can only mean *unphenomenal*; and we ought at the same time to distinctly recognize the fact, that the un-



phenomenal is not less complete and rational in its own order than the phenomenal in its order. Our wisdom lies in seeing, once for all, that phenomenal facts must lapse into unphenomenal forces that can be approached in no other way, and in no fuller degree, than we now discern them. Physical facts, complete in their own circuit, initiate mental facts, complete in their circuit; the energy of connection is inscrutable, and so is the energy in each circuit. In each case the energy is declared by the results, and by these only. It is not one whit more astonishing that there should be a connection between physical facts and mental ones, than that there should be a connection between physical facts or between mental facts.

What, then, since we can in any case inquire into phenomena only, are the phenomenal facts of interaction between matter and mind? Events in the physical world imply fixed, specific forces in a state of transfer. There is a constant, progressive interchange of expression, with an exact equivalence of energies in its successive steps. The physical world, therefore, in its laws or methods, can be looked on as a thing determinate and finished. This fact is not altered within itself by the intervention of mind. In the mediums of intervention, as in the nervous and muscular systems of man, the mind modifies the equilibrium of the parts, and so sets the wheels in motion under their own impulses. In the telegraph, the circle of energies operative through wire and battery is complete in itself, and worked within itself. The operator neither adds to nor takes from these energies. He intervenes by modifying the conditions of their interaction. In this case we know precisely how he interposes. But this knowledge does not alter the facts of law and equivalence in the closed circuit of electric energies and chemical action.

The mind of man has the inscrutable power, in the far more subtle circuit of the nervous system, of affecting the times of action, though the actions themselves remain complete under their own laws. No series of physical facts is altered within itself or within its own relation, by the intervention of mind. Mind initiates its action in each series through one of the terms of the series, and carries forward its purposes by virtue of energies already involved in the circuit before it. Physical facts remain as completely subject to physical laws under the handling of mind, as when in undisturbed play among themselves.

The opposite statement is equally true. When matter is present, by means of a sensation, as a factor in a mental experience, it no longer retains the force of a causal fact. The sensation receives from the mind which entertains it, under the force of that mind and for its immediate purposes, the power to affect, and the direction and degree in which it shall affect, its thoughts, feelings, and actions. Sensation does not push its way toward terminative force, into a mental circuit. There lies within a mental experience of a given object, to be used according to the aims and exigencies of personal power. The circle of mental energies, active under their own laws, is modified, not broken, by sensation. We may illustrate this by such a familiar fact as the composition and dispatch of a letter, at length placed in the hand of a friend. The circuit of action in the writer and that in the reader are made to touch each other by means of this letter, with no transferred force from one to the other. The characters gain nothing in the writing and lose nothing in the reading. They are a dead medium between living things. The two experiences communicate without transfer. The eye no more drinks in a definite force in reading the letter than the hand

yields one in writing it. Whatever may be its effects on action, they arise because of new factors which are introduced, on occasion of this letter, within the experience of the person addressed. The letter is no cause, no medium, no force; nothing is transferred from the first circuit to the second, which, as an energy in transit, explains the new result. Thus is it constantly in the reciprocal modifications of physical and mental events. These stand to each other as conditions without alteration of nature or transfer of force. If we should say that the mind inserts a force, even the slightest, among physical forces, we should be in no way helped by the assertion. The mystery would still remain in the dependence of this force on the mind. The mind employs forces, which depend backward and forward on other forces, without in any way breaking this dependence.

We turn to our next inquiry—the authority of these ideas. The authority of the two is the same. They involve alike the ultimate interpretation by mind of the facts which come before it. They have the same authority as sight or memory or judgment. They are the product of constructive, rational powers. They are ultimate assertions of mind, and are possessed of the same strength as that which belongs to any branch of knowledge. We accept a theory because of its explanatory power; we believe a conclusion because of its clear dependence on its premises; we insert the notions of causation and spontaneity because they bring light to the facts before us, because they bring knowledge; and knowledge approves itself both directly and indirectly to the knowing mind.

Causation is so thoroughly inwrought in our physical experience, and particularly in that experience as interpreted at the present time by science, that we need not delay a



pure mental phenomena, and is implied in those self-prompting, self-sustained, and self-guided powers, which, under the general laws of mind, are freely productive of its intellectual experiences. Mind is not a given combination of definite, measured forces, but a germinant centre of powers. It is not like force exhausted by exertion, but thrives on it rather. Its action proceeds from a potential state, and returns to it under a poise and possession of its own.

The question of human liberty has been put to disadvantage by uniting it too exclusively with the will. Volition is only its latest manifestation, and by no means discloses the full scope of the interpretation dependent on the idea of spontaneity. Intellectual action is a hopeless enigma without it. The search for truth equally with that for beauty or for virtue demands freedom of movement within itself. Study mental action in the form of pure thought. Let the mind be occupied with a proposition in geometry. It considers the statements offered, checks the movement or accelerates it, and by its own insight grasps the conclusions. There is here no causation. The mind sees the truth, it does not make it. The truth calls out the mind's activity, it does not cause it. Indeed, the truth has no existence for the mind till it is reached. There are no impelling forces that lie under this movement. There is no place for fixed causes driving on equally certain effects. This exercise of mental power must be understood in and by itself; must be empirically apprehended and interpreted under appropriate ideas. The facts so studied disclose the mind as a comprehending power at work freely under a rational law, which it falteringly obeys. This power is inexpressible in terms of force, and this law is unintelligible in terms of causation. Premises do not cause, they contain conclusions.

If we introduce forces anywhere in this movement of thought, it must be in connection with the cerebral states which accompany it. But these are outside, additional facts, and in no way whatever explain interior dependences. The exterior process no more involves the interior one, than the interior process involves the exterior one. Movements of brain are held in circuits of brain activity, and are there exhausted. In these circuits there is no such action as thought, no such term as thought-force.

Nor can the causal connections of successive states of brain cast as shadows, in any intelligible way, these dependences of thought. Not only cannot the relation between premises and conclusions be causal, it is one directly vouched for by the mind as of a pure, intellectual character. This nature of the relation cannot be yielded without destroying all reasoning, all conclusions of all orders. An interpretation which in any way identifies these mental dependences with causal connections is, thus, suicidal. All causal connections are equally just, equally inevitable, equally supported by the nature of things. If, therefore, mental activity is of this order, every conclusion justifies itself by the mere fact of being, and is equally real and equally true with every other.

The case is the same with the intellectual feelings. These feelings, as for example that of shame, arise in direct view of certain facts, intellectually construed. Vary the mental view, and the feelings vary with it; suppress the view, and the feelings disappear with it. Intellectual feelings are thus disclosed as a secondary action of mind dependent on a previous action. They share the spontaneity of the acts of comprehension and interpretation which accompany them. How different are they in this

respect from the physical feelings, which depend directly on physical causes. These we cannot escape or modify, while the causes remain. We must, if we would remove the irritation of pain, alter the conditions, or divert attention.

I need not urge that highest expression of spontaneous power which is known as choice. The whole moral problem of life turns upon it. Causation, distinctly apprehended and clearly carried through, gives no room for responsibility, no conditions for duty. These words simply become a strange, inapt nomenclature put upon facts under one law with those of the physical world. There may be an opportunity for inexhaustible illusions of speech, but there can be no two laws, one of things and one of persons, gotten out of the single law of causation.

These two ideas, causation and spontaneity, have, in reference to each other and with each other, complete expository power, when called on to cover the world of physical and spiritual facts with which we have to do. Take, as an example, the two logics, that of induction and that of deduction. The one is a logic of facts to be applied by careful observation, the other a logic of ideas admitting of purely intellectual development. These two forms of logic are not to be resolved into each other, because they apply to two sets of realities: the one, that of physical facts united to each other under the relation of causation; the other, that of mental conceptions cohering by the connections of truth. A purely deductive logic has nothing to do with things or causes; it demands, therefore, for its explanation a wholly different set of relations; while the two logics, without exclusion or inclusion, cover the field of knowledge.

There are the same fundamental divisions implanted in

history and in language. Who can write history without recognizing spontaneity, responding to its own laws of truth and right; laws of no possible avail, unless there is personal power to spring up under them, discover them, and obey them? The two realms of matter and mind are deeply divided by the fact, that the events of the one realm take place in darkness, while those of the other are forever pushing up into the light of consciousness, and there assuming a higher form of obedience. Spontaneity parodies these relations of thought, under a mingled phraseology, which does as much to hide as to disclose the truth, but a philosophy rational to "the realm of matter and motion" can only touch the surface of history, or expound some of the physical facts which accompany it and modify it.

What I would mention in this preparation is, that the entire phraseology of the intellectual and moral world has translated, in spite of its physical origin, to the higher meanings of the spirit, but the fact that spontaneity pervades speech. We have things stated in an indicative and imperative mood, running parallel with the indicative mood. But the potential, the suggestion, and the imperative are grounded in spontaneity. Without spontaneity there are no possibilities, no suggestions, no commands, causation has no place for them. But it may be said, these uncertainties, which I have indicated, and so creep into our language, certainly do exist. But how do they find their way into knowledge, if knowledge is only one more fixed and indissoluble form of causation? Knowledge, on this supposition, has no it is mere potentiality, is no more open to a variety of results, than physical events. It is simply an event among other events. One half of human speech has no any otherness, with no conformity to the truth, even the other.



We thus see how thoroughly dual is the movement of the mind in comprehension. We swing from limb to limb and so walk. The actual in matter and the potential in mind, the permanent in matter and the variable in mind, that which may be known in matter and that which can know it in mind, are the grounds of all interplay and comprehension. The fixed cannot measure its own fixedness, nor the flexible hold fast by the flexible only.

If, with the idealist, we lay hold of deductive logic, and build up by means of its relations a universe of thought, we have no science. Botany, zoölogy, geology, find no sufficient recognition in our system. If, with the empiricist, we accept causation, with its logic of induction, and so reverse the method, we have simply repeated the error in another form. We have in our construction no place for philosophy, no room for mental science. No events, enclosed in other events and a part of the great problem to be explained, can give us either philosophy or psychology, either the final method of comprehension or the powers by which it is to be achieved.

We cannot merely assume one set of ideas, as those of space and causation, and proceed by means of them with our work of inquiry; we must allow the correlative ideas, those of consciousness and spontaneity, silently to arise over against them, or we have nothing wherewith to employ or to expound our first assumption. Space is what it is only by its relation to consciousness, wherein it gains recognition. Space is not known to itself. Causation is what it is only by its opposition to spontaneity. Simply necessary events do not constitute knowledge, nor can they bring knowledge. There is nothing for them to correspond to in that fixed dependence which we know as truth. Truth involves both the mental and the physical,

and their correspondence. The eternal antithesis of the universe, as it lies in our experience, is matter and mind, that which can be comprehended, and that which can comprehend, that which can give the material of judgment and that which can furnish the relations affirmed, that which can offer the under plane of sensations and that which can spread over it the upper plane of ideas, between which the mind is in perpetual action.

While the two ideas, causation and spontaneity spring up at once in the interpretation of human experience, spontaneity is likely, in the outset, to claim more than belongs to it. It is experience alone that gives us the facts and the nature of the facts to whose interpretation the mind is called; and it is by experience, therefore, that we learn the appropriate application of the primitive ideas of reason. The mind is at first strongly impressed by its own activities. The easy commencement and interruption of its own movements are conspicuous. The mind, prior to a diligent inquiry into facts, readily extends this impulsive action to the world about it, and explains many things by personal qualities when these are not present in the facts. Slowly, as knowledge increases, causation wins more and more perfectly its own field. The perpetuity of the physical forces with which it has to deal impresses itself on the mind, and causation spreads consecutively through the entire realm of things. The contrast offered to the mind by its own freedom helps this result. This freedom expresses itself in laying hold of and using physical agents, while these agents respond steadfastly to the hand that grasps them. It is plainly seen that there is no vacillation save in the mind itself. Inception, change, arrest, lie here. What the mind determines holds fast till the mind reconsiders it. The inception of action in the intellect would

have no significance were it not for the perpetuity of the forces by which it is expressed ; nor would this perpetuity in turn be significant, if, by including the mind in its own fixedness, it at the same time excluded the mind from intermeddling therewith. In the exercise of will we learn that there is something other than will which is to it as material of power. The two ideas are applied with increasing safety and accuracy along this line of experience, till they hold the universe in equilibrium between them.

While these ideas are every moment present in expounding and handling the conditions of life, the slipping and confused way in which they are applied is due in part to the inaccuracy of language, shaped to its purpose long before this process of distinction had been completed. The words we employ in dealing with spiritual facts have been transferred from the physical world, and often appear in their own livery, and with the taint of a lower service still upon them. While we cannot expect to much alter the ordinary use of speech, seeking convenience of expression quite as much as accuracy of thought, we ought at least to be able to distinguish ideas so diverse, and yet so easily confounded, as those which rule respectively in the physical and in the mental world. The underlying energies in the physical world are forces ; in reference to the manifestations which accompany and follow them, they are causes ; while these manifestations are, as referred to these forces, effects. The laws of connection are those of causation, and, as involved in forces already present, are determinate in every particular of quality, quantity, and direction. There is neither chance, accident, or fluctuation. Space is the supreme form-element under which these forces find expression.

The underlying efficiency in mental facts is mind, whose various modes of action are powers. This spiritual presence is, in reference to its own activities, an agent ; while these activities are actions. In reference to previous forces and surrounding conditions, this spiritual agent is a creation that in coming into being takes nothing from existing energies, and in passing out of being adds nothing to them ; in reference to the intellectual phenomena that arise from it, this agent is itself creative. The conditions immediately operative on mental facts are, in connection with our thoughts, premises ; in connection with our feelings, incitements ; in connection with our actions, motives ; but premises, incitements, motives, are themselves dependent on the mind for existence, and are not, in reference to it, the seats of impelling forces.

The laws of connection between facts of mind are in turn peculiar to mind, those of thought, of feeling, of volition ; those of truth, beauty, and right. These laws turn, in obedience, on the spontaneous action of each mind. Their fulfilment is involved in no existing forces, but in the options and energies of thought. Here is the realm of the potential and the possible, of things to be hoped for and things to be feared, of things true and things untrue, of actions which are right and actions which are wrong. The form element under which alone these spiritual facts find expression is that of consciousness, a realm that no force invades or can invade. In these opposite yet correlative conceptions and constructions, we have the earth beneath us on which we walk and toil, on which our bodies furnish us footing ; and the heavens above us, giving us air, light, inspiration, the visions of life, mortal and immortal.

The distinctions in language which we have now indi-

cated as differences that should be made more firmly and held to more closely are already in our daily speech. The distinctness of expression requires only that each term, ceasing to vacillate, shall settle at, and rest in, its most distinctive meaning. Language recognizes the required shades of thought, it fails only in not holding fast to them in all relations.

The apparent dualism of the view now presented is apparent only. Strict monism implies one primitive element, substance, or form of being; dualism accepts two such forms of being. The present experience of man is dualistic. His own intelligence is awakened toward and drawn out by an external world. The weakness of either term is fatal to his development. Any considerable deprivation of sensation, as in the deaf and dumb, arrests or greatly limits mental growth. This is all that is affirmed, the manifest dualism of human experience. This dualism, however, includes the constant dependence and extended interaction of these two terms in human life, matter and mind.

The mind seeks and must seek unity, but monism is not so much unity as a unit. Unity includes variety as an essential term. If the variety disappears, the unity disappears with it. One primitive element, one indistinguishable substance, one notion, cannot be a source of unity; it is a barren unit of which the mind can make nothing. A true unit is not possessed of unity. The mind must either find in it some new division, or add to it some second element, before it can initiate any movement of thought concerning it. The first, fundamental contrast in human experience, aided and enriched by a thousand secondary contrasts, is this of matter and mind.

The unity which lies beyond human experience is quite

another question. As mind alone is the source of unity, as things have unity only as relations of reason are introduced into them, as the diverse powers of mind instantly unite in the transcendent unity of a single experience in consciousness, we are not at a loss to find the conditions of the primitive unity of the universe. Dualism, with the eternity of matter as one term, destroys the existing unity of the world as certainly as its ultimate unity. Transient and superficial conflicts are made, by this view, to hide permanent and profound harmonies. The unity of the universe is too fundamental and far reaching not to include many apparent contradictions. The eye that sees it must be able to trace events far backward and far forward, and to discern their convergence in either direction. The very separation of creation, looked at narrowly, may seem to be confusion. The unity we find is the unity of Reason, uniting the most diverse and distant and remote things in one inclusive and thoroughly intelligible movement.

## IV.

### FREEDOM OF WILL. EMPIRICALLY CONSIDERED.

It is not our present purpose to present again the proofs of liberty in human action. These proofs are so primitive in their character, approach so nearly the first principles of reason, that later discussions of them between the defenders of philosophical systems do not often subserve any purpose of conviction.

The object we now have in view is a consideration of liberty as it offers itself in experience, first, in the relation of the mind to the brain ; and, second, in the reaction between the powers of the mind and the products of those powers in itself and in the world about it. If we were to grant liberty theoretically, should we find its exercise possible under our present experience ? This is the question we wish to answer.

It will not be amiss to remind ourselves, in starting, of the nature of the interests involved in this discussion of liberty. Moral facts are supreme facts in human society. The axiomatic principle on which these rest in the general mind is, Responsibility is commensurate with power. This involves at once choice as the indispensable condition of virtue. We are not considering in morals a balance of tendencies, but a balancing of tendencies—a dealing of the mind with tendencies. No adverse statement at this point has weakened the general convictions on which mo-

ality proceeds, or presented itself as more than an ingenious evasion of them. Virtue and liberty rise and fall together; whatever the one loses the other loses also.

The same relation belongs to truth and liberty. Truth is to be inquired into and sought out. It may be attained, and it may be missed. That movement of mind, therefore, which is to be occupied with this work of inquiry, must be flexible and spontaneous; must be at liberty to guide itself by the purely intellectual laws of logic. If thought is in any way subjected to forces beyond itself it can no longer shape itself freely to its own conditions. Conclusions reached under a physical necessity have nothing to do with truth. They are facts, not truths. The laws of logic are not laws in this sense; the mind must move logically; but in this sense, the mind must move logically if it is to reach the truth. The implication is, that the mind may easily move illogically, and miss the truth; that it shapes its own movement to its own object; that it is free, and that truth is the reward of freedom wisely exercised.

The beauty of the world involves a like conjunction of liberty and activity, though less obviously so. Beauty is fitting thought and feelings rendered in a form wholly suitable to them. Its pursuit involves, therefore, an ideal, and a spontaneous movement toward that ideal. Impulsion and force are alien to beauty. Attraction and freedom are of its very nature.

Nor, indeed, does the plain idea of serviceableness—rendered as man always will render it—lack this notion of liberty. The world is made up of forces that may be used, and of powers in man that may use them. It is made up of the fixed and the flexible, and neither term can be lost and the serviceable process remain. State the



case strictly under the forms of empirical forces, and not only do virtue, science, art, disappear, use also disappears. We use things in this higher sense when we shape them to our purposes. We use air not when we breathe it spontaneously, but when we fill our air-brakes with it. We use water when we convert it into steam in our boilers, rather than when we drink it under an organic impulse. If the world, both in matter and in man, is made up of forces under settled laws of interaction, man no more uses matter than matter uses man. If we include in the natural what is causal and fixed, and in the supernatural what is free and flexible, the natural can never be in any way handled or interpreted or used without the supernatural. Whenever interpretation reaches either comprehension or use it must do so by virtue of the supernatural, and in behalf of the supernatural. To these ideas of knowledge and of service the one is as necessary as the other. The knowing and using agent is not at the same time and in the same relation a part of the thing known and used.

Human knowledge and human liberty fundamentally planted in this union of the physical and spiritual, as we here conceive them, show empirically two lines of limitation. The first of these appears in connection with the brain, the medium by which the mind receives influences, and the instrument by which it communicates energies. We may pass at once to the extreme conclusion which science is approaching, that the nervous system in man, with its great centre, the cerebrum, is constructed throughout with definite lines of inner and outer movement. Organic connections differ from mechanical ones in admitting a greater variety of offices, and allowing a freer substitution of one organ or one method for another; yet



cially the cerebrum, in man are the seat of a series of interactions which take place between the inward movement and the outward one, and are governed by them; if the phenomena of consciousness are simply the accompaniments of these complex actions and reactions in the brain, then liberty is lost, not limited, by such conditions.

The adverse reasons are many. (1) A very large share, much the largest share, of nervous interplay goes on both in the lowest and in the highest life without consciousness. Consciousness is certainly no necessary product of merely nervous interaction. (2) Consciousness regarded in this light is from beginning to end a superfluous term. If consciousness is incident to forces seeking directly their own ends, we have no more use for consciousness in living than in dead things; no more need of it in securing the muscular activities that follow thought than in the circulation of the blood, or in uniting the recognition by the eye of the characters on the printed page with the muscles of the throat in articulation. If no state of consciousness is of itself productive of subsequent states of consciousness, but all are alike dependent on underlying cerebral conditions, then each state of consciousness and the entire series of states are, in reference to physical events, super-numerary results. Between these states and these events it is impossible to affirm any correspondence which is of the nature of knowledge; or any purpose which this knowledge subserves. Knowledge becomes the product of alien physical causes, and is itself alien to those causes which proceed quite independently of it. (3) Consciousness has been introduced in development, on the contrary, as a new term in a higher life, incident not simply to organic relations, but one that seems greatly to extend them and put them to new service. (4) There is no

known counterpart of any given thought in any given molecular changes of any nerve substance. The first and fundamental step of proof in this direction has not yet been taken. The whole theory of correspondence has not one explicit fact to sustain it. The senses are definite in their outer conditions and inner impressions; the activities are definite in their inner conditions and outer effects; but our experience does not extend or cannot extend to any pure mental state as the exact counterpart of a physical one embraced between these two lines of ingress and egress. Arguments looking to such a conclusion are all inferences from inefficient grounds.

There are two contrasted views that we may take of the relation of the processes of pure thought to cerebral action. We may regard them as strictly incident to cerebral changes which intervene between sensation and action. This supposition implies an exact and causal connection of each specific cerebral state with a corresponding state in conscious action. The line of efficient force is thus maintained in the physical world. Or, we may regard pure intellectual activity as a distinct term, under its own laws, which is introduced between sensor impressions and muscular action, as the muscular is an independent agent between the sheet of muscle that heaves on the piano and the instrument itself. On this supposition the mind as mind receives impressions, correlates them in its own fashion, arrests them, or passes them on in effect according to its own ends. We may, if we choose, modify this second opinion by still further supposing that there is a distinct molecular state of brain as the necessary accompaniment of each thought, but that it is secured by existing states of mind, and not by antecedent sensations. This expansion of the theory, however, seems to be a weak conceit

sion to physical ideas, as no such correspondence can be proved, and the cerebral states thus accompanying pure thought would have causal connections neither with antecedent nor subsequent cerebral states, would be a dead term in the material world, and serve no known purpose in the mental one.

This intervention of mind does not imply any chasm in physical sequences, any break of relations between sensations and actions, but simply the power of the mind to penetrate, and in a great variety of ways to modify, these connections; thus heat alters physical sequences, without interrupting them. The change does not lie in the insertion of alien terms, but in the control of congenital ones.

Several empirical reasons are urged for the strict dependence of thought on cerebral states. In insanity, it is said, the mind is subverted in its action simply by disease of the brain. But this it should be under either view. The mind is dependent for its facts, or supposed facts, on a nervous organism, and an abnormal state of the organism may wholly alter the data of thought. The quickness, however, and accuracy with which the patient reasons from his premises are often very observable. If the sensor and active physical powers are broken down by disease, the mind on the one side loses data, and on the other side the power of expression. Aphasia, or the inability to write or utter words, is often offered as a proof of this dependence. This fact, however, seems to look in the opposite direction, as the idea is still grasped in the mind even when it cannot control the organs of utterance.

But the experience which looks most directly to a constant and complete dependence of thought on cerebral conditions, is the sense of fatigue and the waste of nerve-tissue which accompany the action of mind. This fact

requires careful consideration. Under all theories the brain is the medium of impressions and expressions, and the action of the mind lies between the two. The only question is whether it lies as intervening cerebral links between cerebral states, to which connection thought is incidental; or as a relatively independent spiritual power to which no cerebral state need be set apart. In either case the action of mind involves sensor activity and motor activity, and this, too, in a much higher degree than is usually thought. It is this incipient or complete ministration of sensor and motor action of the brain to the mind that we regard as a sufficient explanation of the fatigue of mental activity.

Things and words are the counters of mind, and without them it can make only the feeblest advances in reflection. But things involve sensor impressions, and our acts of attention, analysis, and arrangement involve sensor impressions and motor activities. The sensor and motor terms are as omnipresent in inquiry as are the two poles in an electric current. Still more, if possible, is this true in the use of words, the most intimate and constant means of thought. When the words of others direct us, they become sensor impressions that call for careful attention. When we ourselves guide our thoughts by words, they are either distinct motor terms or *quasi*-motor terms.

All acquisition commences with language and seeks its constant aid, and as language has definite cerebral terms involved in its use and expression, we find in this fact an occasion for a consumption of nerve-tissue in all mental action. Children, if circumstances admit the habit, prefer to study aloud; that is, to aid the comprehending process by a full use of its counters. If the habit is inconvenient, the pupil will often move his lips without emitting any

we are compelled to carry it on mentally, and are not allowed visible counters. In this case the steps are no more difficult, but the difficulty of retaining them is greatly increased. Mere revery, in which the transitions are very loose and the terms vaguely given, is restful rather than fatiguing.

It is an ultimate fact in neurology, that connections once established in images or in actions, become increasingly easy and spontaneous. The power to utter words by rote, into which complete memory is constantly passing, is plainly the result of nervous and muscular training. Literary matter which has just been learned can be repeated but slowly and hesitatingly. A repetition on successive days greatly increases the facility of movement, and a repetition at distant periods very much strengthens the hold of the mind. We often render aloud lines of poetry, giving full sway to the rhythm, as a means of recalling one or more missing words. The loss of memory by disease and its restoration by health find explanation in these neural connections. More recent occurrences suffer most from this loss of recollection, and the power of memory returns by first regaining more distant events, those whose connections have been fully established in the nervous system. This order of restoration is made plain by the simple fact that memory is supplemented by vital connections in the nervous system of perceptions and of actions with each other. Relations fortified by a deep-seated habit are more quickly restored than those not yet impressed by repetition. We can also thus explain the way in which one event is fastened in the memory, while adjacent events are lost. A memory which easily lays hold of an idea, but retains with difficulty the precise words in which it is stated, is doubtless to be ex-

plained by diversity in the cerebral conditions of language ; as much as is hesitancy in speech as contrasted with volubility. Memory is evidently much modified by the fact that it so often involves the physical condition of expression.

More than one instance of this kind has come to my knowledge. A person, awakened from a deep sleep, has recalled certain thoughts that were present to the mind, and also words that accompanied them. Giving the subject closer attention, he has been surprised to find that the words did not belong to the thoughts, but seemed to have been evoked vaguely by them. The thought-process stirred the faculties of expression without controlling them. In like manner sounds that enter the ear are distorted in dreams so as to suit the circumstances of the dream, rather than the external fact. Both of these results indicate a momentary separation between the thinking process and the organs of expression and perception which accompany and sustain it.

The hesitancy and difficulty which the mind sometimes encounters in trying to recall a word seem to lie in the feeble hold of the memory on the one side, and the inability of the mind to guide the organs of utterance on the other. The image of the written word and the sound of the word are both partially present, and both fail of perfect form. Thus one may have uttered yesterday a difficult sound, and have lost to-day the power of repeating it.

If we allow an exact correspondence between cerebral conditions and pure thought, we confound the distinction between instinct and reason. Instinct is plainly characterized by a direct connection of external stimuli with appropriate actions ; the transition being, however, more or



less protracted, and united with the ordinary variable experiences of life. Reason, under the view now combated, would be simply an extension of instinct, whereas it manifests itself not only as a new combination of powers, but also as one that is constantly setting instinct aside and reducing it to its lowest terms.

This theory of an exact correspondence between cerebral states and rational activity makes no sufficient and no plausible provision for the growth of rational powers. Cerebral states and cerebral actions are not inexhaustible. If a distinct combination is demanded by each distinct thought, and if memory requires the preservation of these combinations, the capacity of the brain would be steadily exhausted by its development, and we should experience in reason, as we do experience in instinct, limits to mental unfolding. So small a substance as the brain cannot, in its molecular states, be the counterpart of the entire universe in all the actual and possible relations of its parts. There must be some limit to the *discursus* of reason if each thought appropriates a definite portion of a limited power. The theory is unreasonably complicated, and in that degree improbable. It would also imply increased difficulty in the acquisition of mental power, when the facts disclose increased ease. Nor is it any relief to this embarrassment to say that the special senses, like the eye, give the mind very complex impressions by an equally complex organic state. The image of a landscape is displaced by each succeeding image. The eye is a specialized organ that has been developed to its present power by stages of growth that date back almost to the beginning of animal life, and yet its maximum power is represented in the reproduction of a single landscape, with very great limitation of distinctness of vision beyond the immediate

centre of observation. The method and degree of reproduction in the eye and the ear give no color of plausibility, but the reverse rather, to the supposition that the cerebrum has in its molecular action an exhaustless representative and retentive power both in the regions of imagination and of abstract thought.

Mathematical truth and all exact knowledge lead to the opposite conclusion. Cerebral states as physical effects can never be the precise counterparts of each other in different brains. No truth, therefore, dependent on such states could be absolute and universal. Some kind of color-blindness would sooner or later show itself in all directions.

The deductive reasons already referred to come in to confirm this conclusion of the relative independence of pure thought in an unmistakable way. No physical relations can be the equivalents of logical convictions; and no convictions can be merely physical effects. The two lines of law are not parallel, and cannot be made the counterparts of each other. The conditions of thought are not those of force.

We may then pass all strictly physical experience as indeed giving limits to liberty, and sometimes limits crowding very close upon it, but limits that never abolish it as long as thought remains. We turn now to our intellectual experience in its relation to freedom.

Men start with a balance of powers and a bias of disposition which are not easily modified or resisted. This natural disposition is the result of primitive passions and tastes that are stubborn facts by no means to be wiped out by a simple choice, nor indeed altogether to be rooted out by the most faithful and continuous effort. A portion of these proclivities may be attributed to physical in-

heritance, and a portion to original endowment. For our present purpose we need not strive to settle the balance between them, or even stop to enforce the existence of the second constituent. The position of the individual in reference to liberty is not much altered whether his first make-up comes to him by descent or by gift, or by a combination of the two. The stubbornness of these first tendencies experience clearly records. Those who have the training of children attach great importance to parentage and antecedents and native endowments. Even in the earliest instruction these forces make themselves felt. The parent and the teacher are constantly aware in the same household of diversities of temperaments and tastes as fundamental considerations in discipline. It is true that much more can be done in shaping these forces early in life than later in life, but they can at no time be overlooked, and will often undo unskilful and even skilful labor in a sudden, resentful way.

It is also to be remembered that the moral inheritance of early surroundings and discipline so adds itself to, and incorporates itself with, primitive endowments as to be practically inseparable from them. By the time a young man begins to come within the range of his own personal freedom, a composite stream of strong currents has him in hand. He need not lose time to inquire how he came by his inclinations, whether by primitive endowment, by physical inheritance, or by direct instruction; to guide and shape these energies, already realized in volume and direction, becomes his sufficient labor. The limitations of liberty are, therefore, very obvious and very great. They are allied to those of a gunner whose position and piece are given him. Said an active boy in answer to the complaints of his sluggish companion, "I do not walk

so fast on purpose—I cannot help it.” If we look at the limitations of liberty in reference to the immediate actions that are to follow them, we may regard freedom as not having much to do with the ordering of life. Indeed, hasty reasoners often come to this conclusion.

A restriction closely concurrent with this of primitive disposition, is that of habit. We all become increasingly aware of this restraint as we advance. We are not simply hampered by physical habits, but by intellectual ones also. The lines of thought we have taken up we pursue with increasing ease, but we are at the same time more and more reluctant to accept new ones. In youth we were adepts in mathematics or quick in languages; in middle life we discover we have much narrowed these powers by disuse. We have passed the point of indifference in reference to any class of attainments, and find them all positively easy or positively hard.

The convictions we have reached, especially those touching action and character, personal, social, and religious, though they themselves may have grown up in the exercise of liberty, are still limitations upon it. Especially is this true if a dogmatic spirit enters into them and we regard our opinions as finalities. What Lantrey says of Napoleon is capable of much wider application. He is speaking of wilfulness—which is really the want of well-ordered will as united with very great intellectual powers. “The studied frenzy of a calculating mind is without remedy, because it does not depend on a sentiment, but on the very form of the intellect itself.” This is true of all mental activity in proportion as it becomes deep and narrow. The life flows on in it as a river in a cañon, not merely beyond flexion, but for the most part beyond observation. A dogmatic intellect does not sim-

ply open before us one way, it systematically closes up all other ways. Dogmatism is a universal loss of liberty, and most of all in the inner life of the mind.

The remoteness of primary principles from the truths which flow from them leads to the same result. Most of the discussion by which the current of empirical philosophy is resisted in our day goes for little or nothing. It lies far out among marginal truths, and can find no acceptance with minds adversely disposed, and rarely leads to a fundamental renovation of thought. A boy sits upon the bank of a stream and gives his slight boat an impulse up the current; it soon returns to him, because the water flows in the opposite direction. The tidal movement of many minds is something not often comprehended, difficult to be resisted, and hard to be overcome. While the questions involved are questions of reason, the questions are very many, and the reasons very many, and are arrayed like armies. Single men or single regiments of men can no longer wage successful war.

Another restraint which overtakes freedom in its unfolding, is that which arises from the accumulating force of feelings and of social relations. It is thought that the minds of women are less open to the force of reason than those of men. So far as the assertion is true, it is largely due to the emotional energy which characterizes them. This medium of thought refracts and colors the light on all personal topics, till a presentation is insensibly reached that suits the temper of the inquirer. Light is full of all colors, and will yield them all according to our analyzing prism. Wise men find that in dealing with the foibles of others they must not expect to remove them, but rather to accommodate themselves to them. Friends that undertake thoroughly to correct each other will soon reach

aversion. Refractions that belong to the very atmosphere of the mind itself must be patiently borne. It is far easier for those who see these disturbances of vision in others to endure them, than for those who suffer under them without recognition to remove them.

Not only are the feelings themselves very persistent forces, all our social relations become objective provocations to them, renewing them constantly and with great energy. As we interpret society to-day we interpret it to-morrow; and it acts on us vigorously to perpetuate ruling impressions. Hence it is not our own emotional atmosphere simply, but the atmosphere of the world we live in, that is unbraiding the light for us, and casting sombre or brilliant colors on the objects about us. To these physical and intellectual restrictions are to be added secondary ones which arise from their interaction. Disease, fatigue, old age, success, failure, predispose the mind to certain judgments which are not easily cast off. The unsuccessful man becomes untrustworthy in his opinions.

We care not to trace these limitations further, but wish rather to inquire how they leave the problem of liberty. So profoundly are some minds impressed with these subtle and overwhelming influences, that human liberty sinks out of all high estimate. Life seems but a painful beating of the waves of the ocean by a swimmer who must ultimately sink. Constraining forces are of the most pervasive and insinuating order; they are often nearest us when we think least of them, and bind us most when we seem to ourselves most free.

Accumulative impressions, like those now brought forward, require corresponding care in the search for compensatory considerations, or they quite confound the thoughts. We are too much accustomed to think of

liberty as the immediate casting off of restraint, and as efficient, therefore, in the degree in which this is accomplished. This is far from the truth. The value of liberty lies in its power to work under and with invariable and permanent forces. If liberty involved mobility simply, it would lose its possessions as fast as it gained them. The air is mobile, and for that reason its distribution of parts has little interest. We can carve nothing out of it and record nothing on it. Rocks are comparatively immobile, and immediately they become material in many forms of work, while their distribution is an important fact. If results followed on after vagrant wishes, choice would gain apparent power, but would suffer immense loss. The thing done would be as quickly undone, and the clash of choices would be as idle as the collisions of winds. Indeed, there can be but one Aladdin with his magic lamp. He alone must be left to act on things fixed and permanent for all but himself. A pair of them would subvert the world, become spirits with invulnerable bodies, who could settle nothing in conflict.

The resistance which surrounding conditions offer to liberty represents the strength and tenacity of the material at the service of the mind, and is a question simply of the right degree. If the resistance is slight, the gains are slight; if the resistance is great, the labor must be great, but so also may be the results.

Now the individual and the race encounter in the exercise of freedom two lines of resistance: that offered by matter, and that offered by the mind itself. The first of these is, in the strictest sense, the coherence and firmness of material. It is the office of mind, availing itself of inorganic and organic laws, to permeate matter and hold it to fixed and extended service. The most complete

illustration of this is the human body, penetrated in every part with nerves of sensation and action, and so becoming not itself merely an arena of mind, but a powerful instrument of mind, operating by means of it freely in the physical world. To complete this mastery of mind over matter, to establish it as a settled intellectual dynasty, is what wise men are about in the world. Now material laws are sufficiently pliant to thought to make this labor possible, and sufficiently resistful to make the gain of infinite worth when secured. Men soon learn that mere vaporizing accomplishes nothing, but they also learn that skill and patience are surprisingly effective. The stream does not flow like water, but it flows like a glacier. It can hardly be said that the physical material offered the hand of man is so intractable as to waste liberty; it has rather that degree of tractability which stores liberty.

But the second line of resistance is one of equal interest—the restraint which the laws of mind offer to mind. It has been found a universal social law, that if freedom is to grow, wisdom and virtue must grow with it. It is the same truth we are contemplating in the limitations of liberty within the mind itself. The agency slips away from the agent unless the agent masters himself also. While man is held back from the control of the physical world by laws within that world, he is equally held back by laws within himself, and the two sets of laws must be handled together and mastered together; otherwise the movement will soon find arrest. When the mind stagnates within itself its external force is lost also. The *real* centre of liberty, the pivotal point of revolution, is the action of the thoughts toward the truth.

What do the limitations of freedom which we have found arising within the mind itself signify but this, that



the growing points of intelligence and virtue must be carefully maintained? If these are lost, freedom is lost. The mind settles down under fixed opinions, becomes subject to an unbroken sequence of feelings, and accepts the social sentiments that prevail about it.

The one condition of freedom is to maintain unimpaired intellectual activity in all directions of action. This alters the horizon, varies the grounds of effort, breaks up and subordinates habit, and holds in arrest the aggression of other minds. The mind that ceases on any topic—for instance, on that of religion—from fresh intellectual activity has turned down the light by which it should be guided, and it is only fortunate, therefore, that it begins to fall into a calculable routine of action, that it does not go plunging on with nothing to direct it. When the buds of a tree cease to shoot, the leaves may come and go for awhile with the seasons, but the constructive life is arrested. The limitations of liberty do not show the power of man to be of no value, but only that there are moments, places, and ways of its skilful application.

We are not to conceive liberty in men as a gigantic power, easily executing its purposes and holding fast results with a firm grasp. We all start under conditions alien to ourselves, organic influences, educational influences, social influences. Here is a young man brought up on a farm to hard labor, close economy, and a limited intellectual horizon. External circumstances and parental precept and example have concurred in deepening the ruts in which he is slowly moving onward. None the less it is possible that some new activity shall come to his thoughts, that he shall of a sudden say to his astonished father, on the occasion of some new exaction: "I do not think so." From that moment he may begin to break the cords that

have bound him, and, in the progress of years, get to himself new incentives with a new outlook. Motives have force, not in themselves, but in relation to the mind to which they appeal. Change the mind and you change the motive. When a man thinks to some new purpose the chains of custom drop off. Every man, in his experience, is liable to share the astonishment of the father, when his son says to him for the first time: "I think differently." As a man thinketh so is he. Here is a pivot of movement which no external facts can control, but upon which they in turn are dependent. If we introduce liberty in human action at this centre of thought, and leave it to extend itself by a steady modification of internal conditions, and to maintain itself by fresh acquisitions, freedom is reconcilable both with the theory of life and the facts of life, and is seen to be the one significant factor in them both. No fixed dependences are possible, so long as the mind can change its own sensitivities by inquiry; and the impulse to inquiry is a fundamental fact in our intellectual constitution.

If there is a slow accumulation of circumstances about one which hedges the way, the fact is due to the passivity of the mind in the ripening of events. If the mind is active and watchful, this infinite division of particulars, this slow gathering of difficulties, are in favor of liberty. By foresight and effort the mind increases its powers of resistance and guidance. The problem of life is, indefatigable will at war with unwearied forces—but forces can be divided against themselves, and enlisted on the side of will.

While spontaneity exercised in thought—and in this way productive of light—is the condition of continuous freedom, the condition of the condition is virtue, feelings

that turn on and subordinate themselves to the truth. If the intellectual movement is not honest in its incipency, it shortly fails of thoroughness. It is not light alone that is the efficient, constructive force in the green tissue of leaves; it is light and heat. It is not truth alone that maintains the vitality of growing points in the mind, but truth and feeling. Feelings that are alien to the facts soon alter our conception of the facts, and so the facts shake us off and escape us. We are not masters, because we have lost the true word of command. We cannot be averse to any truth and yet fully understand it.

Personal liberty is like liberty in the state. Its safe possession is one of profound obedience to deeply implanted principles. It is not, therefore, the less liberty or of less worth. On the one side the very condition of strength is a struggle with domineering tendencies, and on the other their steadfast government under new conditions. Liberty is a movement from law to law, each succeeding law being higher, broader, more inclusive, and more fortunate.

The value of liberty is that it enables the mind freely to conform to law. The liberty that does not pass instantly into law is like the seed that is not sown in the soil. It abides alone. Liberty that confines itself to its narrow field, that is content to knit skilfully together the past and the future at the one plastic point, the present, is not weak, it is well-nigh omnipotent. It only requires long times and large spaces in which to unroll its power; it merely calls for material of every order and the union of every law by which to record its work. There is no reason in any limitation of liberty why, under the laws of inheritance, man should not in time walk the earth with the bounding life of an archangel, govern it with the

strength of an archangel, and take home its thoughts and feelings to the pure and serene experience of an archangel.

The one law of this progress is continuous intelligence and virtue.

## V.

### CONSCIOUSNESS AND SPACE.

IT is an assertion in philosophy which meets us from all quarters, that to think is to condition. This statement affirms that the mind, in every judgment concerning things, puts upon them some relation or condition. This view of the case follows directly from intuitionism, and is also vigorously supported by empiricism. Every primitive, intuitive idea expresses a relation or form of some order, which the mind discerns as applicable to the facts before it for their rational comprehension. The form-elements are referable to the insight of the mind, and the phenomena to sensation and experience. Judgments are the rational products which arise from the union of these two constituents—briefly put, intuitions and sensations.

While all regulative ideas, as existence, number, time, may in general phraseology be termed form-elements, under which phenomena gain definite expression, there are two ideas that in a more narrow and direct way give form to the facts they enclose: those of space and consciousness. Notwithstanding all the unverified assertions and the confusion of thought that have arisen in connection with subconscious phenomena—phenomena that are neither in space nor in consciousness; notwithstanding that there are and can be no terms in our experience which establish such phenomena, or make them intel-

ligible to us; notwithstanding that the term itself, sub-conscious, involves heterogeneous ideas, these unformed images still linger, and still produce incoherent results. Subconscious phenomena are of course phenomena, and should, therefore, be amenable to the imagination. They must have definite form, and that form should admit of statement, illustration. But all the experience of men is constructed under two notions, space and consciousness; facts which come under the one form are physical, those which come under the other form are mental. The imagination is limited to these two forms; the assertion of a third form in and among the facts of the world is profoundly unintelligible. No such term is known in human experience either among measurable or minute things. We have not only created our facts, we have given them an incomprehensible form, as much so as if we had spoken of matter without locality. These alleged facts, therefore, can subserve no purpose of explanation, as they are intelligible neither within themselves nor in their relations to the valid terms of experience. We have in these statements a remarkable example of the power of the mind to project a shadow beyond the region of shadows, and to use a purely verbal term as if it were a real one.

If what has now been said is understood, we have no occasion to proceed any farther in this direction. Unconscious intelligence is inconceivable and unverifiable, and therefore profoundly unserviceable and unphilosophical. It implies a state beyond all the known forms of experience, an unintelligible state, and shares to the full this unintelligibility.

I have now for long striven, with little success, to enforce the true nature of consciousness. It is the primitive, unchangeable form-element of all mental phenomena as

opposed to physical phenomena, whose form-element is space. It is, then, as recognized by the mind and used in this explanatory way, an intuitive idea, like its anti-thetic idea, space. It is in itself a formal element, and, only as grasped by the mind, an intuitive idea.

The failure to see precisely what consciousness is has led, and is constantly leading, to the most confusing and uninformative appeals to consciousness on questions which it cannot decide. Any particularly difficult point in philosophy, any question of obscure analysis, is met by an appeal to consciousness, as if consciousness were, like the eye, an organ of insight. We might as well appeal to space in proof of any difficult facts in the physical world, simply because space is the common form of all facts of this order. An appeal to consciousness can be wisely taken only for the obvious phenomena of mind; or for phenomena as phenomena simply, which are affirmed to occur under certain circumstances. I can appeal to consciousness for the simple facts of sensations, conceptions, judgments, intuitions, but I cannot appeal to it for the validity, the intrinsic correctness, of any of these results. What notion must we have of consciousness who could suppose that "the solution of the problem of bilateral asymmetry is likely to cast light on the nature of consciousness"; as if consciousness were some one of its own phenomena.

The worst result of this confusion is, that it carries confusion and futile assertion into all profound thought. An appeal of the kind spoken of is final in this sense only, that nothing can be made of it, that inquiry and discussion are brought to a hopeless end by it. "The absolute and final authority of consciousness," "The trustworthiness of consciousness," are ever returning expressions in

philosophy. The truth is, the mere fact of feelings, thoughts, volitions, which are the simple facts included in consciousness, are very rarely denied, and are the starting-points with all philosophies alike. Divergence and difficulty begin with an effort to analyze acts of knowledge, and refer them to appropriate powers. This analysis cannot, in its correctness, be verified by an appeal to consciousness, which offers the complex data only. Every reference to consciousness should be to some specific power in some specific form of action. Thus the truth of our analyses and of our assertions under them can be determined.

There are some common methods in philosophy that are intensely unphilosophical; as long as we indulge ourselves in them philosophy can make but little progress. One of them is this blind reference to consciousness. It is a disguised dogmatism which cannot only carry no conviction, but must check all successful inquiry. Another is that previously referred to, of offering, in explanation of known facts, unknown ones, facts that lie wholly beyond the horizon of human experience. This method gives us the philosophy of the unconscious. It makes the known depend on the absolutely unknown. A third vicious method consists in a simple reduction of magnitudes. A repetition in the region of infinitesimals is thought to expound what takes place in the region of sensible dimensions. Of this method there are many examples. Sensible qualities are supposed to accompany matter beyond the range of sense, clear down to the atom, accepted as a dead centre of force. Gemmules and physiological units of infinite complexity, and wholly beyond conception, are offered as the causes of organic structure. Monads, mimic worlds, are made to hold the



secrets of the great world. These theories are all elephants under the earth. They crowd thought out of the region of the thinkable, and then offer this new mystery as an explanation of old ones. Inapprehensible terms, that have no reflection in experience, are set up as lights to that experience. Experience must be explained—that is its terms must be united and related, within its own limits, and all explanations of facts within these limits that, in their supposititious terms, overreach these limits, are fictitious and futile. An explanation of sensible phenomena must be by sensible phenomena. When we reach the supersensible, explanation stops; and whether we shall arrest our processes of thought in Infinite Reason or in finite forces, is a question to be answered by a wise, collective interpretation of human experience. Whichever way we answer this question, the above criticisms are not altered.

There is no more fundamental and fundamentally interesting fact than the division of all phenomena between space and consciousness, matter and mind. It makes human experience from the outset dual, and this duality cannot, within experience itself, be escaped or obscured. It does not, however, stand in the way of the ultimate unity of thought. We wish to offer concisely a few considerations tending to show the unity of matter and mind in mind.

Matter yields us nothing, in ultimate analysis, but some form of action, a specific group of forces. Its sensible qualities disappear, its inertness is found to be an illusion of perception, and all we reach are definite, related, coherent forms of action. It, no more than mind, leaves behind it a permanent, palpable substratum. This fact does not suffer us to set aside the fundamental inference of mind, that effects always include causes, whose nature

they express ; but we are guided by it, in connection with sensible phenomena, not to other phenomena like themselves and deeper than themselves, but to forces, the super-sensible centres and sources of sensible facts. Impalpable and permanent forces, arising in the senses as phenomena by reactions between themselves, constitute our last term in matter. Though this term is material in this sense, that it is conditioned to space, it may still remain true that reason has two kinds of action under two distinct forms.

These forces contain in themselves, as their true significance, the wisdom, the will of the world. If will, wisdom, are not here, they are nowhere in the physical universe. But they are here ; all recognize and find them here. And they are pervasive ; there is no residuum of nature or action which they do not order. We do not yet see their full scope and inter-dependence, but we have all come to the safe conclusion : There is no force which is not one of order, of construction ; on whose birth and exercise wisdom does not attend. The world is not dual as holding elements of disorder or of destruction. What have we, therefore, in matter save wisdom and the action which expresses it ? Remove these two, and there is no remainder. Given reason and the terms of its expression, and we have the intellectual formulæ of the physical world. If we are not at liberty to say that the Infinite Reason, like the finite reason, embraces in one indivisible act these two terms, thought and the language of thought, spiritual activity and its sensible embodiment, we can affirm that this dependence is necessary when Reason addresses itself to reason, God to man, and a common world lies between them.

The mind as mind is not subject to space relations. It comes under them only through physical connections.

By virtue of one's body his physical activity is confined to one place, but his mind, meanwhile, has the range of the universe. He may be intensely interested in events and occupied with them, that are occurring in a locality remote from that of his bodily presence. Motion, transfer, consume no time, and have not for the mind the significance of physical facts.

The mind in its activities is furnished with these form-elements, consciousness and space. Its own action assumes one of these at once, and is confined to its action in inference and outward construction call the aid of the other, and reaches objective validity by means of it. The mind, in its own experience, is enclosed in consciousness. In its constructive knowledge it extends in space. Human activity arises in the interaction of these two terms, the ego and the non-ego; and the mind is as much at home with one form-element as with the other, each in its own office.

We make a mystery here where there is no mystery. We are at a loss to understand how the mind, enclosed in consciousness, can affect and be affected by forces enclosed in space. The difficulty arises from extending the notion of space beyond its own field. The mind is regarded in some sense local, subject to space, in spite of the affirmation that its formal term is consciousness, and not space. Hence we put the question: How can the mind pass from consciousness into space? This question implies that all forms involve in some way local dependences, and that the mind is to pass an impassable chasm. But no special movement belongs to mind. Two diverse activities of mind arise under two diverse forms, that is all. We do not perplex ourselves because the same facts are in one relation events in time, and in another relation things

space. Yet time and space are incommunicable. A moment expresses a period in time, and is not comparable with any measurements in space. Each form stands by itself, shuts up in one relation its own facts within itself, and is alien to every other form. The idea of transfer only arises when we try to put one form upon another; in the case under consideration, when we try to subject consciousness to space. It is fundamentally absurd to ask how mind, whose form of activity is consciousness, can move among physical things, whose form is space. It does not move among them in the most direct meaning of the word move. How can truth, we may inquire, which is spiritual, be involved in physical things? The spiritual activity is, by a misleading word and image, called in to disclose itself in touch, position, or some analogous physical relation.

There would be an insuperable difficulty in supposing the mind to act in the same way in space and consciousness—to think into space, or to thrust a hand into consciousness; but there is no difficulty in supposing it to act under two forms in ways appropriate to each, any more than in supposing it to act under either form. It may as well act indirectly in space, by the mediation of matter, as directly in consciousness. There is no violation of forms in either case, and the simple, ultimate fact in neither case admits of analysis, and is of the same primitive and inscrutable order.

We know by what mechanism the mind of man acts on the external world, and this fact urges us to think that the mechanism, as local, carries with it a local presence of the governing mind. The fact remains, however, that only physical things are local, and that one form does not exclude other forms—as space time; though the impossi-

bility of motion has been argued from the relation of these two ideas—pertaining in absolutely different ways to the same energies. We can hear and see the same person; sight and sound are not, therefore, overlapping senses. One who could see and not hear might be at a loss to understand how opaque bodies should convey sounds. Truth and right and beauty pertain to the same set of activities; they are not, therefore, inter-penetrative ideas. Inter-changeableness, participation, lie only between like things, are possible only under the same form-element. Mind, being without space definition, is no more excluded from space than included in it. To assert its exclusion is to imply its possible inclusion. Neither assertion touches the case in hand. The simple question is, Are there actions or modifications of actions referable to mind which are physical? Experience answers this question in the affirmative, and there is no more mystery in the answer than in any primitive fact.

The brain of man offers physical conditions of the most unstable, variable equilibrium. This marvellous susceptibility, sustained and accompanied by the plastic power we term life, is affected on its own basis and within itself by mind. Contrivances and self-sustaining physical changes are modified and directed by mind. How? This question is also one incapable of a final answer, and if pushed beyond the limit of possible knowledge becomes irrational. We can explain method as long as there is method, we can analyze forces as long as there is combination, but when method and analysis are impossible, when we reach a simple force in direct action, or, as in an atom, an indissoluble group of such forces, the question, How? is no longer pertinent. To resolve gravity into impact would still leave us an unknown term. These

unknown terms are unavoidable, and our wisdom lies in finding them at the right time in the right place. The effort to finally expel them is irrational. The action of the mind on the brain now offers itself as an ultimate fact, of the same order as the action of mind in consciousness, and as the action of atoms. At all events no absurdities, no contradictions, no unusual limitations are involved in a provisional acceptance of the action of mind on and under matter as an ultimate fact. We can bring to it illustration, not explanation. A fluid may pass through a series of connected and dependent mechanical changes, and yet be modified at every stage by an outside fact, like temperature. Thus water is an invisible vapor, a cloud, falling rain, a rushing river, a placid lake—mobile to every breath or restful under a solid shield of ice—or a creeping glacier. These successive states, while shaping each other, have received form from the invisible agent, heat.

The finiteness of man—the gift of powers and the limits of those powers—is found in the movement of the mind outward into and among permanent, physical facts. Here his powers are made potent, and held fast within their own bounds. If the physical facts modified by man are regarded as the instant activity of the Infinite Mind, we have monism, a consistent supposition, in which both our activity and the activity of God are ordered under reason, with no unexplained remainders. This supposition does not make matter mind, for the physical action still retains its entirely separate form-element and its coherent forces.

The hypothesis includes the reality of both matter and mind. The correctness of our mental processes involve the full depth of this division between mind and matter;

but it does not, as we are apt to think while engaged in establishing this distinction, preclude the appearance of mind under more than one form of activity. Mental phenomena are not subtle phases of physical facts, for they have their own distinct form-element, consciousness; and independent laws of coherence among themselves. No more can we concede the reverse statement, that the physical world is an immediate product of mind, acting as mind in consciousness simply. Physical facts have their own independent forms, and their own laws; and these must be allowed to establish the type.

When the realist appeals to consciousness in proof of his own being and of the being of matter, the appeal should be made under the analysis now offered. We cannot think without thinking, or feel without feeling; that is, consciousness is the universal form or condition of mental activity. Hence consciousness, or rather activity, in consciousness, includes and implies a peculiar life, to wit, mental life; and activity beyond consciousness, activity in space, involves another form of existence, that of matter. These conclusions are established not by consciousness as a power, nor by any one power acting in consciousness, but by the facts which the mind, in the full circle of its powers, recognizes—the unchangeable form of its own life in consciousness, and of external events in space.

The phenomena of matter and those of mind have each distinct noumena. This is the most direct inference of mind. But why put physical noumena in ultimate dependence on mental noumena, rather than mental noumena on physical ones? Because physical noumena share order, reason, with mind, while mind has nothing in common with matter except reason, and reason is spiritual.

All that belongs to matter beyond reason are but the means by which reason is expressed. Reason is the constructive idea. We refer matter to mind on precisely the same ground that we refer written language to man: it has no law of construction within itself; such a law is a spiritual element, and must be derived. But if derived, its insertion carries with it the entire fact of language, to wit, the informing force of reason under suitable signs.



## VI.

### IDEAS—PRIMITIVE, SUBSIDIARY, AND GENERAL.

THE intuitive philosophy maintains that mind is at least an equal factor with matter in the intellectual universe, the universe of thought. Our rational experiences are the product of the union of two elements, referable respectively to matter and mind. In this claim it is in harmony with what we see elsewhere. Phenomena are never attributable to one term only, but lie indivisible between at least two terms, in their action and reaction.

Matter is the occasion and controlling cause in sensations, though the sensations are also conditioned in their form, intensity, and governing power by the mind which experiences them. These sensations furnish the data, the first facts, which awaken mind, and give it grounds of action. Reason as reason, as penetrating and comprehending power, discerns, in connection with these sensations, the ideas of rational construction and relation which belong to them and give them intellectual significance. Sensations as sensations are known by the senses only. Sense stops abruptly with the sensation. This it completely explains, and it explains nothing beyond it. But these sensations are capable of various references and different forms of construction—of transformation into perceptions. They thus stand in intelligible connections with each other, and interpret for us

the real being which lies back of them. The ideas by which this construction of changeable sensations into permanent facts is reached, are furnished by the reason; are called out by the phenomena which require this exposition. The judgment, uniting these two terms, sensations and ideas, reaches knowledge, definite assertion, formulated experience.

Ideas are of three kinds, primitive ideas, subsidiary ideas, and general ideas. An idea, as opposed to a perception and a conception, is an abstract term in mind, known as a datum of reason, and not of sense or of imagination. Primitive ideas, like those of space, time, give the original constructive relations under which sensation passes into knowledge. Subsidiary ideas arise in the use of primary ones, and turn on the same original insight. General ideas are the fruits of experience, and spring from abstraction and generalization. They are the final forms which knowledge is assuming. Such notions are those of hardness, color, wisdom, utility. These general ideas, the products of an extended and intelligent use of experience, cannot arise without those primitive ideas which initiate mental action. Qualities, modes of action, may be distinctly considered and turned into abstract ideas and terms the moment we attain to sensations, on the one hand, and interpreting ideas, on the other, as the first terms of intellectual activity.

All experiences may be discriminated as real, as various, as like or unlike. Later these experiences divide under two wholly distinct forms, those which occur in space and those which occur in consciousness. The first of these are united under the idea of causation; the second under that of spontaneity, directed by truth and right. When the sentiment and the physical form perfectly concur,



nomena are precisely the same in their impressions, we express this phase, that of complete resemblance, under the term identical. Thus the properties of elements as manifested at different times are identical. This identity is that of effects, is an expression for perfect resemblance, is one result which we often reach in comparison, and have occasion to designate.

When we add the ideas of causation, time, and place, we meet with certain effects which are not only the same in sensible qualities, but are coherent in time and continuous in space. This fact, which the mind is prepared to recognize in its rational force, we term the identity of causes or of substances, the more absolute identity of inner being.

If we contemplate, in our own experience, the coherent facts of mind, as verified by memory and observation, we state this permanence of being in the mind itself by the phrase, personal identity. If, under the notion of truth, we consider the agreement of two judgments, two conceptions, two ideas, with each other, we may affirm the agreement as absolute, the identity of reason and the acts of reason under its own unchangeable laws. *A* is *A*—mind is true, that is, true to itself thus becomes the substance of all assertion. Distinct phases of relation, therefore, that gain prominence in the use of primitive ideas, and are expounded under them, are covered by this word, identity.

In connection with the notion of number, the analytic and synthetic processes of thought are initiated, and the whole and a-part reappear everywhere under very varied and manifold forms. Mathematics is not the direct product of experience; it furnishes rather the relations under which an understanding of physical things is possible. Mathema-

tics is an extended intellectual solvent by which material things assume for the mind new bearings. This is very manifestly the relation of mathematical discussion to scientific truth in all the later and clearly recognizable phases of knowledge. Mathematical conceptions precede their use in science, and have a precision and exactness not derivable from the facts to which they are applied, and which usually can be made only partially to reappear under them.

This, therefore, we believe to be the order of thought from the beginning. The notion of the unit, the absolute one, forever equal to itself and identical with itself, emerges in the action of the mind, as it uses things and seeks to understand them. The unit is not found in the things; the things only partially, in varied and symbolical ways, represent it. This notion of a unit, with its parts, one half, one third, one quarter; and its combinations two, four, six, is transcendental, an absolute term in knowledge, which the mind gains increasing facility in using in a proximate and representative way, and under actual divisions in things of growing exactness. Suppose a tally to be kept of bushels of wheat measured up on a barn floor; stones, sticks, apples, potatoes, any thing which chances to be at hand, are used. These diverse things, unlike in every relation to the senses save that of physical coherence, stand each of them representatively for identical units; while the bushels of wheat, if honestly measured, stand approximately for equal units. The mind is not in the least disturbed by either use, and knows that in both uses the arithmetical terms and relations are absolute. The merest child is so little embarrassed by this symbolical expression, that to draw attention to its significance tends rather to create than remove confusion. When a

boy is asked, How much will ten pounds of meat come to at ten cents a pound, if half of it is fat ? he feels at once that he is being quizzed by the insertion of this new and irrelevant term.

A unit, itself absolute and capable of being divided into absolute—that is, perfect—parts, and entering into absolute or perfect sums, is fundamental in number. When this idea is distinctly realized, the-whole and its-parts appear in a thousand ways in the processes of analysis. We discriminate qualities from associated qualities, as color from hardness ; we carry the discrimination to various forms and degrees of intensity, as when we distinguish color from color, and the various shades of color from each other. Reversing the movement, we unite things in thought that have very slight or remote or subtile connections with each other, as when we speak of one forest, or one history, or one lot of goods, or one genus. Thus the notion of unity gains great extension, and still retains something of its mathematical force, as when we say, the whole—whatever that whole may be—is equal to the sum of all its parts.

Mathematics, in the separation of length from breadth and thickness, and length and breadth from thickness, gives an example of transcendental analysis in the use of the notion of number. Every form of analysis and synthesis is sustained by this notion of a unit, a unit which does not lose its mathematical force no matter how tenuous may be the connections to which it is for the moment applied. One lot of goods, one shade of color, one thought, still add up as three conceptions.

Unity, plurality, totality, in all the phases of their use, arise under the notion of number, and all conceptions approach exact knowledge in the degree in which the abso-

luteness of the unit is found to be applicable to them. In space and time, in which we are dealing with forms and divisions as pure and complete as those which pertain to number itself, we secure an exact knowledge of transcendental relations. The actual as actual does not hold the transcendental, yet the transcendental may find, and does find, partial symbolical expression in the actual. We may reach the properties of curves from figures which only suggest the true construction. We can pass from the imperfect to the perfect, the sensational to the transcendental, by awakening the intuitive reason; we can drop from the perfect to the imperfect, the ideal to the real, and carry with us the force of a pure movement. If we add to space and time existence and causation, we find occasion for the subsidiary ideas of position, motion; giving rise in connection with experience to inertia, momentum.

Under causation such ideas as substance, action and reaction, permanence, change, at once appear as subsidiary notions to the primary one of cause and effect. This idea leads immediately to the division of the world of existences into phenomena and noumena, qualities and substances, effects and causes. Every thing becomes dual, with a phenomenal form and an inner force. Qualities are thus the qualities of substances, manifestations the manifestations of forces, experiences the experiences of minds. Real being underlies and sustains phenomenal being. This is the result, if we regard the present moment. If we take into consideration the past and the future, then the present is a portion of the stream, sustained by what has gone before it, and itself sustaining what is to follow it. Not only do causes accompany effects; causes serially sustain each other, and pass into each other in time. Thus we have

the subsidiary ideas of stability, perpetuity, change, indestructibility, equilibrium.

When we come to spontaneity in mind, the idea at once gives occasion to the distinctions involved in potentiality, actuality, and, as in contrast to causation, in freedom, necessity, fate. The word, chance, if exactly used, expresses equally an effect without a cause or an action without an agent, and so finds as a fact no place in human experience. It gains a modified meaning when we designate by it effects and actions whose causes and motives are disconnected from the causes and motives for the moment under consideration. Chance is thus the accidental interruption or modification of one series of events by another series.

Having the idea of truth, we find occasion at once to distinguish statements as affirmative and negative, universal and particular. In the use of the ethical idea, that of right, we reach immediately the notions of duties, rights, justice, benevolence. These cover distinctions in ethics which find explanation in an experience arising under the ultimate law of conduct, right.

By primitive ideas, we understand those absolutely simple notions which the mind brings forward to the facts of experience as essential for their immediate comprehension; by subsidiary ideas, we understand those ideas in which we recognize and mark some especial distinction or phase of thought which arises under primitive ideas, and calls for attention; by general ideas, we understand those concepts which are the result of an analysis of experience, and which express a quality or group of qualities, a relation or group of relations, among things and events. The general idea is based on experience, expounded in connection with primitive ideas; the subsidiary idea is based on



intuitive notions, and expresses some form or phase of their application. Intuitive ideas are conditions of an analyzed experience, rather than the products of such an experience. Primitive ideas initiate the movement, subsidiary ideas serve to extend it, and general ideas express its results in empirical knowledge. Subsidiary ideas, like identity personal identity, justice, are liable to be placed among primitive notions, and so to confuse philosophy. It is against this result that we wish to guard.

## VII.

### THE FUNDAMENTAL RELATIONS OF LOGIC.

OUR primary judgments are formed by the union of facts of the senses with those ideas which the reason of man brings to them for their apprehension. Later judgments often arise from previous judgments. New judgments are reached by combinations from those already formed. This process is that of reasoning, and is the chief subject of consideration in logic. The forms of reasoning and its fundamental connections are discussed in logic.

The form of proof may, however, be present when the judgments themselves do not arise in dependence on each other, but individually. These statements, The drawer is in the table, The book is in the drawer, Therefore the book is in the table, express facts of the senses in the form of a syllogism. They do not, by virtue of this formal relation, become reasoning; or lay the foundations of proof. The essential fact of reasoning is that the conclusion rests in the mind on the truth of the premises. The nature and validity of this relation in proof is the topic of logic. Information that is thrown into the form of logic does not thereby become logical. It is logical only as it involves inference, only as inference is its essential characteristic. The proof or testimony of our senses is not dependent on logic, or discussed by it.

Inference lies between ideas and between events. As

logic is a discussion of relations of thought, pure logic involves these relations simply, aside from the special terms under which, in any given case, they find expression. Pure logic considers this relation of inference as it lies between formal terms of defined value; applied logic considers the relation as it lies between things, events, and is modified by their special conditions. The one is a logic of transparent ideas, the other a logic of opaque events.

The mind has certain pure ideas which it can extendedly develop in the relations they involve, with no reference, or only an indirect reference, to experience. These ideas are evoked by experience, and assume clear form in connection with it; but once fully present to the mind, they can be unfolded in a region of speculative thought that transcends experience. They bring interpretation to experience quite as much as they receive it from experience.

The one great example of this form of reasoning is mathematics. The fundamental notion on which it proceeds, is that of equality. The equation is its typical form; equality and inequality are its constant assertions. Equality is involved in number, and number is a primary relation which reason brings to the apprehension of things. That one equals one is the fundamental numerical conception; it quickly comes to the surface in mathematical thought, is incapable of farther explanation, and brings light to all kindred relations. The notion of this absolute oneness or equality of units exists long before it finds any approximately successful application to things, and is the very ground of that application. Equality is never in the senses in any absolute way, no matter how carefully our methods of measurements may have been perfected; while its absolute character in the reason is the constant condition and provocation of this increasing exactness of our practical estimates.

Six oxen and six oxen make twelve oxen. Six oxen must be equal to six oxen as a condition of this statement, and each ox must, in numerical force, be equal to every other ox. But as no ox is, in any empirical way, the equivalent of any other ox, it is plain that it is not an empirical fact that is stated in the proposition, six oxen and six oxen equal twelve oxen. The mathematical force of the fact is, simply,  $6 + 6 = 12$ ; and the empirical force of the assertion is that each ox may, in our experience, stand for one. The inequalities between things, even their entire diversity of nature, does not prevent their enumeration together; on this condition, however, that all empirical qualities are overlooked, and that each thing assumes a purely typical force identical with that of every other thing. We may thus tally our measurements with any thing at hand, taken separately or mingled. This use of numbers is purely symbolical, and all that is requisite for the convenience of the symbolic process is that each thing shall have physical coherence, and so not lose its representative power. This fact has led Prof. Jevons to say that number is "the empty form of difference." Not so. "The empty form of difference," or coherent diversity, is a condition of its practical application, but does not in any way express the nature of number. This cannot be expressed save in and by number itself. It is a notion of a simple and primitive order, and admits of no explanation beyond that of the insight which reaches it. The mind early recognizes this identity of units, and is not in the least confused by the diversity of the things which stand for them. It is no more disturbed by the variety of things which retain the tally, than it is by the uniformity of the metallic counters which express different charges at a restaurant. Symbolism, representation, sub-

stitution, are processes native to the mind. Later, however, when the mind undertakes to make these mathematical relations the counterpart of actual ones, it finds occasion to struggle long and hard with the obstinate inequality of things, overcomes it but partially, and correspondingly loses the force of proof in all statements concerning facts.

The idea of number, involving the absolute oneness in value of units, is capable of extended application in connection with other ideas as pure as itself, those of space and time. In the relations of space, assumptions may proceed to any degree without measurements, or any fixed units of measurements, and the relations of lines, surfaces, solids, may be indefinitely discussed with no estimate of any actual line, surface, or solid whatever. It is not things but relations that are under consideration. The last step, that of measurement, is not called for till we undertake to pass from abstract relations to the concrete facts under them. The relation of equality can also be discussed in connection with time, by assuming an exact numerical expression of forces and motions, and combining these under pure hypotheses. The correspondence of these hypotheses to the facts about us is a matter of the utmost interest, but is not necessary to the logical validity of our conclusions. The one relation assumed and discussed in mathematics is that of equality, and this rests on the notion of number as bedded in the reason of man.

The processes of reasoning in mathematics are not so much deductive as productive. The definitions of a circle and of a parabola do not contain the properties of these curves as a latent fact in the mind waiting distinct development. No understanding of the meaning merely of these definitions, or of the axioms to be used in unfolding

these curves, can disclose their properties. Under the idea of equality we proceed from relation to relation, from property to property, till we attain the accumulated knowledge of this branch of geometrical discussion. This notion of equality gives, at each step, the conditions of new combinations, and these combinations are fresh truths, reached along this one relation that binds them together. No one of these contains the remainder, though all stand in dependence on each other, and on common conditions. When we make this relation of dependence, typified by an arch, equivalent to that of comprehension, typified by the logical circle, we are being misled by a figure. The mind moves forward in mathematical proof to strictly additive conclusions. The process is one of production.

Applied logic deals with things; more especially, in the form of events, the manifestations of properties, forces, powers. The controlling idea under which events in the physical world are united, is that of causation; it is, therefore, under this idea that we reason from one event to another. When this reasoning is modified by the idea of spontaneity, acting under the laws of truth and right which belong to persons, it is not essentially altered in its logical character. Experience interprets spontaneity for us, precisely as it interprets causation, by a partial apprehension of the conditions of action. Under the idea of causation we have occasion to infer effects from causes and causes from effects; under that of freedom, actions from persons and persons from actions, by terms of resemblance which we owe to experience. From the apparent agreement of causes we infer agreement of effects, and from likeness of personal relations we anticipate likeness of actions. The notion of causation expounded in the axiom, every effect must have a cause, is explicit and

complete within itself, and a sufficient foundation for exact truth. The doubt which attends on induction arises from the practical obscurity and complexity of causes and of effects, and the impossibility of any complete empirical knowledge of them. The causes with which we have to do have a range of efficiency and suffer modifications quite beyond our scope of successful inquiry. The properties of elements we may determine with considerable exactness, but the complexity of forces and conditions in the ordinary events of life is much too great for exact knowledge. We have, therefore, great difficulty in tracing causes in their effects, in referring effects to their causes, and so in reasoning from one event to another. The embarrassment does not lie in any want of certainty in the underlying connections, but from our inability to fully grasp the facts before us, to understand the phenomena with which we are dealing. Two men of similar circumstances and constitutions fall sick of the same disease. They are both treated in the same way. One dies and the other recovers. Or they are treated in different ways. Both die, or both recover. The treatment stands in some relation to these results, but in what relation? It is impossible to answer with certainty, because of the great variety of causes and effects, direct and indirect, that are hidden under apparently similar states and similar results. Causes and effects are not isolated, are but obscurely disclosed in sensible qualities, and rarely admit of definite statement in quality and quantity. The election of life and of death are as obscure to us as Pharoah's treatment of his butler and baker respectively.

In a much more simple case, we reason from the appearance of iron to its strength, or from the treatment to which a given rod of iron has been subjected to its tenacity. We

still fail to be able perfectly to interpret appearances, or so to trace processes in their results as to reach our conclusions in individual cases with absolute certainty. In all reasoning under causation we are not proceeding from a direct insight into causes, but from a more or less vague discrimination of causes and effects, a more or less unsafe interpretation of them by sensible qualities, and a hesitating reference of these to each other. We reason from terms we have not mastered to other terms no more completely understood. In dealing with persons our apprehension of the impulses operating, whether those of appetite, passion, interest, affection, truth, is often very partial, and our embarrassment is accompanied by an equally perplexed reasoning from superficial resemblances interpreted by experience.

This is the nature of inductive reason. Its fundamental axiom is that of causation, but this notion is applied under the idea of resemblance to premises only partially understood by us. The logical process which guides induction, must be distinguished from the examples and experiments which direct and correct its conclusions. If we simply learn the properties of metals by trial, the results reached are not those of reasoning, but those of observation. While observation in induction must guide and must confirm inference, it itself must be more or less guided by inference, and it should furnish grounds for still further inference. Observation treasures up its truths in the same bundle with those of reflection. The two classes of truth are, however, referable to different powers. A logical process, complete within itself, cannot escape, in its application to things, the uncertainty of premises incident to our limited powers of observation. Herein is the gist of our difficulty in induction. We frame our



premises under the idea of resemblance, and resemblances are obscure and changeable terms.

In induction we reason from example to example, the proof gathering certainty by the multiplication of examples. If we thoroughly apprehend any one example, the relations it establishes can be carried at once to all like examples, equally well understood. The multiplication of examples is not for the sake of the steps of proof, but for the better elimination of obscure modifying circumstances. Dealing with elements like oxygen, carbon, we expect that their interactions will be invariable; but if we are considering the effects of oxygen in a complex organism, like the human body, we are not surprised at a variety of results. A multiplication of examples, as in testing the strength of timber, enables us to reach an average result; or, as in observing the qualities of different species and varieties of timber, to estimate the significance of sensible qualities. In induction we strive under the notion of causation to establish a general truth, to be applied under facts diverse from each other, and diverse in different degrees and ways. Our conclusions have, therefore, a varying force, according to the nature of the agreements involved or assumed in the premises.

When we deal with men, we not only have to do with blind impulses, but also with personal insight into the laws of truth, of beauty, of right. Actions in these new directions, notwithstanding their spontaneous character, are not less calculable than those which depend on causation. Rational action gives to itself, in the perception of truth, beauty, and right, laws of high, concurrent quality, and the conduct of men would be peculiarly intelligible, if uniformly based on these impulses. Our difficulty in predicting human action does not arise from its freedom

under laws of reason, but from its want of obedience to these laws, and from the semi-physical and confused incentives which take their place. The entire field of human action is changeable under the different degrees of intelligence and of virtue which enter into it. Inferences which have to do with human action differ from those which have to do with things, in adding, as a further modifying connection, the notion of spontaneity, acting under its own laws; and in offering new complexities to the causes operative in conduct. This unmeasured volume of human life, combining in its flow so many streams, is simplified in part by our deeper insight into motives as contrasted with causes, by the strong assertion of single motives, and by the increasing uniformity which truth and right bring to human conduct. Spontaneity is often objected to as if it were the introduction of a chance element into action. On the other hand, the self-defined and self-enforced laws of truth and righteousness are the most transparent media of any with which we have to do. The liberty of virtue is exercised in the discernment and application of the plainest law of human life.

In induction the permanent underlying idea is that of causation, united in man with that of spontaneity, while the variable interpretation on which each argument is actually resting proceeds under resemblance. Resemblances are the changeable terms in which causes offer themselves to our consideration.

The last form of logic is that of deduction. It arises from the extension and application of ideas, of hypotheses, and of general truths. The connection of thought is that of identity. What has been affirmed has been affirmed; *A* is *A*. The conclusion is contained in the premises; a full apprehension of the premises carries with it the con-

clusion. This logic is the logic of interpretation, as opposed to pure logic and applied logic, the logic of mathematics and of induction. As we have not sufficient insight to reach at once all that our major premise contains, we analyze it in a minor premise, and gather in distinctly the result of the analysis in the conclusion. This is the appropriate office of the syllogism. The relations of the syllogism can all be expressed to the eye in circles, which include or exclude each other in whole or in part. The final affirmation turns on the degree of inclusion involved in the two previous ones.

A good illustration of the development of ideas is found in that of causation. Every effect has a cause, is the simplest statement of this notion. From this axiom of the reason there follows: Like effects have like causes; like causes have like effects. Each effect has but one cause; each cause has but one effect. Nature is uniform in its action. The same effect, it is said, may have different causes. This is popular rather than scientific language. The canon of agreement in induction is thought not to furnish absolute proof. While two or more instances of the same result may have but one circumstance in common, that circumstance is not thereby shown to be the cause of the result under consideration. "Suppose that we have  $A B$  followed by  $a b$ , and  $A C$  by  $a c$ ; it might at first appear that  $A$  must be the cause of  $a$ . It is, however, conceivable that  $a$  may have been due to  $B$  in the first instance and to  $C$  in the second. This consideration, it is plain, vitiates the reasoning." "A particular kind of food, whatever else I may eat or drink, or however various the accompanying circumstances, invariably makes me ill. It is still possible that on each of two, three, four occasions the unfavorable consequences have followed from other

viands." This estimate of the force of the causes is practically correct, though theoretically wrong. The theory puts the conditions with an exactness which practice does not enable us to attain. Our causes are not represented by  $A B C$ , and our effects by  $a b c$ , but rather by  $X Y Z, x y z$ . We know neither the number nor the limits of our causes or our effects. What we term the same effects, are the same only in a superficial way. We may speak of sickness and of death as if they were in each case the same result. They may be very different results. Death as an identical result in two distinct cases can accrue only from identical causes. The same result, using language with exactness, is not attributable to different causes. If it were true that  $a$  can be referred to  $B$  and to  $C$ , the relation of causation would be destroyed. The exact dependence of the effect on its own cause, is the gist of the idea. If different causes can produce the same effect, or different effects be referable to the same cause, then there is something either in the cause or in the effect which does not appear in its correlative, and so far the relation is lost. If either more or less is found on the one side than appears on the other, causation has, to that degree, failed. Nature is uniform, because of this stubborn equivalence. Instead of explaining the weakness of the canon of agreement, as we should have done, by the uncertainty of the terms, we have admitted an idea fundamentally subversive of the relation under consideration—the idea that the same effect may have two diverse causes. Our formal statement would be  $A B X$  followed by  $a b$ ,  $B C X$  followed by  $b c$ ;  $b$  may then be referable either to  $B$  or to  $X$ .

The canons of inductive logic, agreement, difference, variation, offer all of them deductive conclusions under

the law of causation. The only reason why the results reached in proof under these canons are not as exact as the canons, is, that our knowledge of the events expounded is not so complete as to make the method safely applicable. We have no such causes as  $A B C$ , and no such effects as  $a b c$ .

Oddly enough inductive canons are simply deductive conclusions under the notion of causation. Actual inductions under these canons involve another more variable and more difficult relation, that of resemblance. That to which our attention is chiefly drawn in inductive logic, is deductive reasoning. The peculiar difficulty of induction lies farther back in determining causes from the marks of causes, effects from the marks of effects, and compelling the two to take exactly their appropriate place in our formal proof. We know the place to put what we have in the argument, but we do not know exactly what we have to put there.

Illustrations of the deductive expansion of hypotheses are constantly found in natural science, as, for example, in the wave theory of light. Some sciences, as that of political economy, are made to rest extendedly on hypothetical statements, that approximate the facts to be considered, without exactly conforming to them. Thus the psychological principle which supports political economy, is the assertion, that all men will seek the largest returns with the least labor. This is a very general truth; so general, indeed, that many safe conclusions can be made to rest upon it. It is not, however, a universal truth. Ignorance, prejudice, custom, convenience, conviction, will interfere with it in various ways and in various degrees. Yet it remains of great importance to trace facts as far as they come under the fundamental law of self-

interest. In like manner, by overlooking the complexities of actual life, and by tracing leading relations, we may reach many truths in morals. Yet, what is demonstration in theory may become uncertain proof in practice, and the mind be left to creep along a path whose direction it knows, but whose next step it hardly sees.

The third field of deduction is the application of principles established by induction. If the inductive assertion and proof were fully and constantly present to us, we should have no occasion for these inferences of expansion, but the inductive assertion is not before us in its full scope. We may have accepted the principle on authority with little knowledge of the cases included under it. We may have forgotten the range of the principle when we have reached it inductively; or we may have satisfied ourselves with a small part of the inductive proof, and be ready to pass over the remainder deductively. In any of these cases we have occasion to expand the principle to its limits. This expansion gives the fundamental canon of the syllogism. What is affirmed of a class may be affirmed of every member of that class.

In the first of these three forms of proof, as now presented, we are dealing with perfectly pure thought-relations. We advance from one position to another on the ground of the essential truth of each under the idea of equality. This reasoning we have termed production, and it stands by itself in its governing idea, and in the extent and boldness of its results. In the second form of inference we are dealing with facts under the interpretation which the mind necessarily brings to them, to wit, that they are the product of forces and powers. These forces and powers we reach and reason from under their mixed and obscure phenomenal expression in resemblances. Un-

able to fully apprehend or exactly to measure these resemblances, we are rarely quite certain of the forces with which we have to do. The certain and the uncertain are mingled in every way and in every degree. In induction we reason from the particular to the particular, and from the particular to the general, along a line of more or less obscure sensible impressions. In the last form of reasoning we accept our premises as true, and then proceed to see what is involved in them. Here we have a logic which is pure in method, but is often modified in force by the relation of its premises to the facts which they are intended to cover. The value of the conclusion must turn not simply on the correctness of the reasoning, but also on the correspondence of the idea, the hypothesis, the principle, with the facts of life. An absolute element enters into the laws of the syllogism, and an empirical element into the profitable framing of the major and minor premises so as to reach a practical conclusion.

In pure logic, we deal with an absolute relation, that of equality between absolute ideas. In applied logic, we deal with the shifting phases of resemblance between things and persons, and so anticipate events. In the logic of amplification or interpretation, we have to do with the content of conceptions, but frequently of conceptions which have been shaped as a more or less partial or uncertain expression of the facts. These conceptions we unfold under the ruling idea of identity. The truth reached is more or less absolute according to the nature of the premises. These forms of logic in reference to each other may be termed pure logic, applied logic, and mixed logic. The ideas of equality and identity admit of demonstration, that of resemblance does not. While the three are not confined, in order of rise and use, to the order

here indicated, yet this is their prevailing dependence. The three forms arise respectively under the three primary ideas—number, resemblance, existence. *A is A*,—the fundamental condition of the deductive syllogism,—is only an expansion of the assertion *A is*. Existence, then, yields the identity involved in deduction. Number contains the equality of production; and resemblance is the interpretation of induction.



## VIII.

### UNIVERSALITY OF LAW.

THE thought of modern time is characterized by the firm hold which a few conceptions have gained on it. Among these is that of law. The absolute universality of law and its indisputable authority have the force of axioms in many minds. It has been and is the chief problem of social science to lay down the lines of development among men under this reign of law. The statement of La Place, that if the present could be completely comprehended the entire future would be seen enclosed in it, expresses the indwelling inspiration of science. This assertion it is not willing in the least to abate, lest its magnificent inheritance should be correspondingly diminished or even shattered within itself. It is not surprising or unreasonable that so grand an outlook of thought should intoxicate the human mind; and that, making the discovery that this entire universe belongs to it, it should strive to hold fast to it under this first title-deed of law.

One thing is constantly overlooked in this sweeping affirmation of law, and that is that the assertion itself is not an obvious fact, but one of those grand casts of thought, by which we enclose, as with the sweep of a great net, spaces and things invisible to the physical eye. It is not a truth of experience—though experience has suggested it to us. The merest fraction of the whole

sum of events has come under our observation, and in these we have been able to trace the equivalences and correspondences which indicate exact law in a very incomplete way. Our induction, far from being absolute and finished, is only approximate and incipient; yet, with one immense stride, the mind, sustained by the inner coherence of thought, and by the conviction that all things are sure to respond to its insight, reaches this conclusion, law is universal. The whole circuit of philosophy can give no better example of the quick and towering way in which mind shoots up, above and beyond its premises, than this which occurs in the very centre of empirical inquiry. From imperfect measurements it affirms perfect proportions; from one measurement in one relation, it affirms a thousand correspondences in as many different relations. We do not doubt that a fundamental truth underlies these bold statements; we simply remind those who make them that they are due to the intuitive range of thought, and are not, and never can be, facts of the senses. Laws in the physical world apply to things in constant movement and interchange—a movement and interchange which are bearing them away in rapid succession from every position in place, or appearance in time which they may occupy or assume in sensational experience. Law affirms fixed methods of transfer and settled terms between which it takes place, and this assertion we accept on what must be regarded as a very narrow basis of experience, when we consider the infinite number and the infinite variety of the facts involved, and their exceedingly obscure character.

If this accepted idea of the prevalence of law is not to bring mischief as well as gain, we need to re-define what is meant by law, and to rid ourselves of the notion that law is

always one and the same thing. The fact is far otherwise. There are no things more distinct in the range of our knowledge than those relations which may be fittingly covered by the word law. If we assert the universality of law, and then take one form of law as the explanatory type of the word, there is no end of the confusion and obscurity our method may involve. And yet, this is more frequently the manner in which the discussion proceeds. We may do this on the side of materialism, making physical law our standard of comprehension; or we may do it on the side of idealism, adopting the logical coherence of thought as the one productive process; or we may, permeated with the faith of theism, make will, and ultimately the divine will, omnipotent; in each case we have utterly obscured and lost sight of great portions of the problem before us. Thus a writer who stands as far within the circle of social science and theology as does Prof. Diman is able unhesitatingly to say: "The law which manifests itself in the phenomena of nature and the law which manifests itself in the phenomena of mind may be the same law; or law in precisely the same sense is equally present and equally operative in either sphere." "Law pervades the spiritual as it pervades the natural world." With the same feeling he says: "There are but two alternatives, chance or law, no third hypothesis is possible." Herein he entirely overlooks the fundamental consideration, that law, as now used, does not express one fact or set of facts, but many and very diverse facts, as diverse as those covered by the words, things as contrasted with thoughts, and necessity as contrasted with liberty.

In this discussion we are to remember that the appeal is to reason, and that we must, therefore, give reason its

full sweep, and stand by its conclusions. The universality of physical law, as against freedom in man or as against intervention by God, is affirmed on the ground of the irrationality of supposing such fortuitous and irregular modifications of wise, constructive laws as these theories admit. It is thought to be irrational in the profoundest way to break in on this coherent and magnificent product of law. The idea of law is called out, extended, and made inviolate by its appeal to reason. No one will venture to say that he knows, or can know, aside from reason, that law is universal; that he knows, or can know, that God has not intervened in a supernatural way in this world, or that man does not share this power. It is not a question of empirical facts, but of the rational interpretation of facts. Hence, as the force of the argument in behalf of immutable law is derived from reason itself, most plain is it that any farther considerations which reason may offer in this discussion, tending to put limits on physical law, to separate it from higher laws, and contrast it with them, should be met with as free acceptance as its previous affirmations in behalf of physical law. The qualifications proceed from the same source as the first statements, and share to the full their authority.

If the empirical school rightly demand our attention when they say that it is irrational that physical law should give way before man or before God; that God is thereby found in conflict with himself, equally can we demand their attention when we affirm that flexibility is in the highest degree rational, and that the inflexible is only one expression, and the more narrow expression, of reason. Reason is the ground, with us both, of our respective affirmations, and by reason we must stand or fall.

The whole subject is hopelessly obscured at the outset

by the supposed unity of law, and by the opposition which it thus assumes to intervention. Intervention, in this view, is transient, accidental, fortuitous. When the choice lies between law and chance, between order and disorder, reason and unreason, we must take the former. The true solution of the problem is found in the variety and diversity of laws; that is, in the variety and diversity of the ways in which reason, in different fields and under different circumstances, expresses itself. Reason includes both terms, the flexible and the inflexible, the variable and the invariable, and combines them in its own way. The intellectual and spiritual are the centre of variable lines of action, and the physical of invariable ones, and they together make up a coherent universe, as much by their contrasts as by their agreements.

There are two strongly opposed forms of law, one resting on measured forces, and the other on spontaneous powers. These two shade into each other by intermingled forms, while the higher, spiritual law also presents its own phases. We shall not strive so much to define each phase of law as to bring out in clear contrast the two distinct centres of law in the construction and government of the universe, physical and spiritual. The notion of law was first introduced into human thought in connection with its most direct and obvious expression. A line of action imposed by one person upon another is the simplest and most primitive form of law. It involves two elements: a line of action for a definite end, and authority. This notion of law, resting on the will of man, or of a body of men, is easily extended to any expression or supposed expression of the will of God. As the will of God is to be found in the works of God, law comes also to mean the methods in which those works are ordered. In

this use of the word, there remains the element of constructive purpose, though the element of authority is much modified by a substitution of things for persons, and becomes an inwrought force or energy steadily reaching the ends proposed. This notion of law has gained another extension. Starting in persons, and later applied to things, it has come also to include regular lines of coherence in abstract ideas. Thus we have the laws of mathematics, of logic, of reason. The one element of fixed constructive relation is all that remains of the primitive idea in this last use of the word.

The laws of reason inhere in reason, and are not ordained by it. There is here no room for superiority and prior authority. Authority, as distinct from the law sustained by it, has disappeared. It is to be observed that of the two elements, constructive order—we say constructive order, for order becomes order and is defined as order by some constructive relation—is least obvious in personal law, and authority most obvious; but in the last application of the word to abstract relations, order is the supreme element, and authority as separate from order has disappeared.

Law, in its application to things, is intermediate between the two conceptions of law in its relation to persons and to ideas. Authority, external to those subject to the law, has become force contained as primitive endowment in the very things that are the objects of the law. This is the scientific conception of law, that order of action which is to be ascribed to the nature of things. An effort has been made to exclude wholly from law in its scientific use any remnant of meaning which attaches to the word from its relation to persons. This effort is especially apparent in the denial of final causes. Law, in the physical world, is

looked on as inhering in things, and things in turn are regarded as existing in some form from eternity or from an indefinite past. On these suppositions, there is and there can be no personal forecast of the future in physical construction ; no final purposes pursued by natural laws.

But this denial of final causes does not essentially alter the problem, because it does not alter the facts. Physical laws remain concurrent, constructive. They are affirmed as laws on account of these their constructive directions, and as a system of laws because of these their concurrent lines. Whatever, therefore, we may choose to say about final causes, the one grand fact of a universe steadily built up by fixed methods of inclusion and rejection remains, and is the supreme fact calling for explanation. Law itself is understood as action toward an end, or *quasi* end. The regularity it affirms is a constructive regularity in each law, and in the relation of each law to all other laws. There may be apparent exceptions, but if this statement did not express the fundamental truth, the mind would quickly cease to take any interest in law. Straight lines that stood in no relation to each other would make no appeal to our comprehending powers ; nor would the mere fact of straightness have any significance except in reference to some more comprehensive form-idea.

Having traced genetically the rise and application of the word, we wish to arrange somewhat differently, for our present purposes, the several forms of law. At one extreme, we place physical laws, the laws of things ; at the other extreme, intellectual laws, the laws of ideas ; while between them are social laws, the laws that apply to persons. Physical laws do not stand detached on the one hand, and intellectual laws detached on the other ; but the two pass into each by intervening and mixed forms.

The field for personal activity and social construction is found along the line of interaction between physical laws and intellectual ones. The laws of physics and of chemistry are good examples of purely physical laws. These laws imply fixed terms and fixed methods of interaction between those terms.

In contrast with these laws, as a marked example of transitional laws, are the laws of the organic world, laws of organic construction and action, laws of inheritance, and laws of variation. Not only can no extension of the lower and more primary laws of mechanical motion and of the combination of elements be made to cover these laws, but there is a diversity in results and freedom in methods in the organic world which, without weakening the notion of law as an ordination of reason, greatly weakens it as standing simply for fixed and inflexible processes. Activity diminishes physical forces; within limits it increases organic forces. Physical properties endure; they do not pass through successive stages of descent, and are incapable of increase. Organic forces are capable of indefinite reproduction and increase by generation. Physical forces are invariable; variation in many and unpredicted directions is a law of organic forces. We have thus a new emphasis laid upon law, as including pliant adaptations, in opposition to unchangeable methods. Reason is seen entering into law, and shaping it into new and progressive forms.

To these organic laws are added those of instinctive life—a life that responds in various and curious ways to surrounding conditions; while to these are added in turn the more complicated and subtle adaptations of sensitive life. Here consciousness is present, and the threads of experience are interwoven in many new methods by the sensa-



tions which appear in consciousness and remain united in memory. The connections of the external, physical world are thus supplemented in the first place by extended, organic connections, and then by new relations between the images of themselves which begin to appear and to combine in consciousness. So far the physical element predominates, yet law has been greatly altered in its nature and form of operation. The experience of the animal is wrought out under general principles of association, but these laws may produce very variable results in different species and in different individuals of the same species. Change and flexibility have found their way freely in between the meshes of law, as light-armed soldiers may advance and retire between the ranks of heavy-armed ones.

We are ready, without farther tracing of intervening forms of law, to proceed to the opposite extreme, that of intellectual law—the law of ideas. Here we have laws of a very diverse nature. Intellectual action, the action of man, is distinguished from all other action in consciously pertaining to ideas. It is not simple union by memory of sensations offered in experience, but these sensations are analyzed, classified, combined, by all the processes of thought. The laws by which this activity proceeds are the laws of thought, the laws of relations, the laws of ideas. We wish it first to be clearly seen that the laws of thought are the laws of relations, the laws of ideas. A good deal of confusion has arisen by assigning to thoughts, ideas, an existence independent, as it were, of the thinking powers, and then establishing a system of actions and reactions between these new entities. Thoughts do not exist aside from the mind. They come and go with each exercise of the powers on which they depend. They are

what they are in all particulars by virtue of those powers. The law of thought is the law of the thinking activity. The same is true of ideas, which is only a more general word than thoughts. Ideas have no relation to, or control over, ideas save through the mental processes which give rise to them. Ideas do not remain behind after the subsidence of mental action; they are simply portions of that action.

The laws of ideas are the laws of the mental powers which furnish the ideas. The peculiarity of these laws is best seen in the phenomena of the purest order subject to them---in pure thought. Take the proof of a proposition in geometry. The fundamental feature of the laws present in this proof is that the proof and laws of the proof are seen together, are seen by the mind to which they are offered, and enforced by it on itself. The law is not announced from without, nor blindly operative from within. It is directly perceived and consciously applied. It is the mind's declaration to itself of the truth. Nothing can take the place of this insight, and nothing, when it is present, can set aside its declarations. The thinking power is a law to itself; it is, as it were, transparent throughout; it sees the object before it and the direction to it. In short, thought is a spontaneous process subject to its own self-applied laws. Thought is a law unto itself. We have not an unconditioned activity, but one that conditions itself in its own light. Nothing that is at all like can be more unlike than is law of this order to purely physical law. A product once secured in the intellectual world--as a theory in science, a moral principle, a poetic sentiment--is capable of indefinite extension in the realm of mind without limitation or exhaustion. The physical conditions, whether of the voice or the press, which

accompany its diffusion involve expenditure, but the idea, in its passage from mind to mind, in its deepening hold on all minds, is possessed of inexhaustible energy. No law of equivalence has power over it.

Out of this clear intellectual centre of self-guided movement, there spring the more remote and somewhat less free dependences of mind. The feelings follow after their several occasions. So far as these occasions are intellectual ones,—and they are to a large degree intellectual—the feelings may be modified by modifying the thoughts. The law of truth in the thoughts is carried over as the law of truth in the feelings. In like manner, it passes through the feelings to the actions; and the freedom of the reason, as a self-guiding power, becomes freedom ultimately through the whole circuit of rational life—freedom of emotion, that is, pure and just emotion; freedom of conduct, that is, integrity of conduct, conduct under an inner law of light.

We wish now to enforce the points of difference between these two extreme phases of law, preparatory to seeing how personal, social action lies between them, embracing them both in the synthesis of a moral universe. The fundamental distinction between physical law and spiritual law is found in the fact that one inheres in forces, and the other springs up in the exercise of powers; that the one is involved in the nature of the things or forces which it concerns, while the other is simply offered to the obedience of the powers which come under it, and offered by the very powers that are to obey it. If we refer all law to the Supreme Reason, then a law of things is one which has passed beyond the contemplation of reason, and is in the process of fulfilment. That law of this order should lose flexibility is a matter of course, since it is in

the stage, not of construction, but of execution. Or, if it be said, that there is in the Divine Reason no distinction between these two stages, making the one less pliant than the other, it is yet to be added, that the Divine Reason is dealing in the world with human reason, and the fixedness of physical things and forces is to human reason a first term in all thoughtful procedure. These two forms of law are then respectively in the stage of simple, explicit execution, and of complex and tentative construction; an execution and construction which are governed not merely by the fulness of Divine Wisdom, but by the narrowness of human knowledge and human experience which they deeply involve in their primary purpose.

A second difference between them is that the physical law must, as a physical law, be obeyed, while the spiritual law may or may not be obeyed. The forces are already in full action which are to execute the physical law, and there is nothing that can intervene. The purpose has been shaped in wisdom, and is in the very process of fulfilment. The spiritual law, on the other hand, applies to incipient powers, which must experience a long discipline under it before they can even proximately apprehend it and partially conform to it. The law may be missed by ignorance, by indolence, by indifference. The law is first to be understood and then faithfully and freely used. This knowledge and obedience are to be gained in and under the law. All construction, therefore, in the intellectual, in the spiritual world, is inchoate and imperfect. The wisdom and will of God submit themselves to that with which they have to do, the narrow and undisciplined powers of man. The ultimate reasons of this are that it is rational to handle each thing according to its own nature

and in reference to the ends in view ; that as motion is the life and joy of things, so growth is the primordial idea of spiritual powers, is infinitely to be preferred to any one stage of development, no matter how complete that stage may seem to be within itself. Growth is the all-inclusive idea and purpose of reason which expounds all defects in method, and the slow steps by which they are removed. Disobedience is constant in the spiritual world, and is endured for the sake of obedience. The mind is allowed to miss truth in order that it may gain truth ; is left to fall into sin that it may also pursue the path of righteousness. The laws of truth and the laws of integrity are constantly disobeyed, but out of this disobedience there slowly arise the conditions of obedience. There is as yet no universal "reign of law" in the spiritual world, because it is in a constructive, chaotic stage, and one which involves both the evolution of the law, and of the primitive terms or subjects under the law.

A last distinction between the two laws, physical and spiritual, is that while both owe their authority to reason, this authority is derived from reason in a different way. Things as things have no powers, no laws of their own, no irresistible momentum, no sufficient reasons. Reasons are rendered to reason and spring out of reason only. If any endowment was primitive in things, belonged to things as things, it would be a simple fact, but could not play any part in thought except as we came to consider it in connection with a general plan, and as aiding or thwarting this plan. Things stand for justification solely at the tribunal of reason, and can oppose no interests or inborn movements of their own to reason. If things have a force by themselves and in themselves, they become a seat of unreason, the realm of a demiurge of resistance and

lawlessness ; and so philosophy for a long time regarded the material world. The best possible proof of the being of God is that this Platonic conception of matter has passed away, that there is found to be no opaque, op-pugnant centre in it, that it is rational, through and through, in its properties and relations. The universe is a grand, over-shadowing product, but it is so because it is a constructive product. If any perpetuity of properties, or persistence of forces should interfere with construction, be found to arrest movement, and to make the physical conditions which underlie mind less concurrent with the wants of mind than they might be, the world would lose its hold correspondingly on reason. It is the relation of things to the ends of thought that give them their value to the thoughts. Thought defines value ; things do have and can have no other value than that which they have to the mind. Fitness, authority are transferred ideas in the physical world. In the spiritual world, on the other hand, they are primitive and underived ideas. The mind itself defines to itself and for itself what is fit, what is obligatory. Nothing whatever can on any supposition enter between the mind and its own vision of truth. A third thing so entering must become to the mind truth, must share the illumination of the mind, must renew the appeal to the mind itself, or remain an opaque object, interrupting and confounding all processes of reason. Reason is the ultimate light to the world and a light to itself. We do not need a second sun to see the sun with. This is the seat, this the ultimate centre, at which authority is born. Authority in God and authority in the soul of man con-cur, because both are products of one reason. The light that is in us is the light that is in him.

Hence the conclusion follows on all sides, that the

inflexibility in things is not primitive but derived, and can hold fast no longer than the end in construction, in reason, which it subserves, holds fast. The universe is, in its order, not over against God, ready to become too strong for him; is in no way sacred within itself, but owes its continuity and steadfastness to the offices which it has to perform. It is not in its inflexibility opposed to the spiritual, but by means of it profoundly subject to the spiritual. If the spiritual has any occasion to modify the physical, it would be in the last degree irrational that it should not modify it. The question of miracles is the question whether miracles subserve any rational purpose; not at all one of resistance offered to them by physical laws.

And this prepares us for what we see in the world. Men do constantly reshape the physical under and yet beyond its own laws. The spiritual is descending every moment into the physical, like rain from heaven, making it fruitful in many new ways. This it does directly and indirectly. Growth means spiritual life, and life means this regeneration of the physical by the spiritual. Nor can the physical go on within itself, unaffected, by the spiritual. We administer remedies to a sick man, in themselves fitted to secure certain results. The results do not follow because mental conditions will not admit them.

The entire field of social law—a field co-extensive with human life, and, of the highest interest to us—lies between physical laws, fixed in themselves, and the laws of ideas, fixed indeed in the Supreme Reason, but waiting with man on farther comprehension. Development, civilization, spiritual growth, are found in the slow attainment, within the mind by the mind, of the laws of truth, which belong to its own action, and their still slower transfer to

external conditions. Movement in the physical world is the expression of law; movement in the spiritual world is toward law. The direction is fixed, is inward toward truth and righteousness, but the conditions are forever changing. Economic, civil, moral, religious laws are never the same for different times, places, and persons. There is here no absolute law and no perfect obedience. The terms of the law may seem to be the same, but our apprehension of these terms vary, and so also do the circumstances under which they are to be applied. It belongs to spiritual action, as the immediate action of the reason, to vary with every new term. Reason is inflexible in the general ends it pursues, but is infinitely flexible in the means it employs. In reference to ends, human thought is with every year gaining increased insight, and, in reference to means, increased wisdom. So all things are in the rapid flux of growth, not in closed circles but in open curves. The "reign of law" means, and can only mean, in the universe as a whole, that a purpose, a divine purpose, runs through all the ages, bearing with it changeable light and changeable relations.

If we attempt to put upon any set of social facts fixed laws, as in political economy, we shall be able in appearance to do so, only by overlooking a portion of the complex causes involved, and by giving excessive weight to the remainder. While it is true that man will seek the largest returns with the least labor, it is a truth much modified by appetite, by passion, by prejudice, by ignorance, by obscure and by obvious spiritual impulses. The final conception which will expound the universe is not one of straight lines nor of curves, no matter how ingeniously combined, as the orbits of events; but the explanatory image will be rather an eternal outflow of a flood of



light, and a perpetual pressing inward of spiritual life to its own centre along these luminous paths of the Divine Reason. We reach unity in the universe, but it is a flexible, changeable unity, momentarily achieved and enlarged in the action of reason, and not a dead unity, under laws that know no modifications. The notion of unity belongs to reason alone, and a unity of movement, a unity of life, belongs only to the Living God. That which reigns is reason, in the perpetual fulfilment of its own purposes. The end purposed involves difficulties, defects, and their removal, and the rate of removal is the step of our Heavenly Father as he leads his children forward.

## IX.

### BEING.

WHILE the notion of existence is simple, and therefore the same in all its applications, the things to which it applies are very different, in what we may term the permanency or volume of being. The rock and the shadow of the bird that is falling upon it are equally real, though facts of very different force. There are three forms of being in reference to force: substantial being, phenomenal being, and formal being. The phenomena of matter or of mind we refer to the substantial forces or powers which give rise to them, while the formal elements or relations of the phenomena are involved in the phenomena themselves. The substance of being is found in forces and powers. These give rise to phenomena, and with the phenomena come those rational elements which make them what they are. Phenomena are the expression of forces and powers, and arise under the relations of reason. Phenomena, like language, imply a sufficient source on the one side, and a significant form on the other. These three forms of being are inseparable from each other in fact and thought. The most mutable relations and the most immutable substances are held in one system.

We approach these three forms of being through phenomena alone. Mind necessarily knows its own phenomena; on this condition only are they phenomena,

or is it mind. Sensations and perceptions are the means of disclosing to it matter, and the phenomena of matter. The phenomena of matter remain, though they are dependent on mind for their precise form of presentation. Force, form, motion, interaction, are in the variable facts of the external world, though they offer themselves to us as colors, sounds, odors, flavors. These complex and blended phenomena are not chaotic, but rational; that is, they proceed under apprehensible forms—*notions* fundamental to reason, and by means of which reason enters into their explanation, precisely as mind enters into speech by bringing to it the needed terms of interpretation. As articulation is always a condition of speech, so is phenomenal being ever the raw material of knowledge. These formal relations are dependent on the phenomena to which they pertain. They are not intelligible aside from them; nor have they any existence except in connection with them. These relations have, in a certain sense, a triple hold on existence. They exist in things in this sense, that things come into existence under them, and awaken them as a part of their own rational furniture in the perceptive mind. They also exist in the mind that expresses itself in phenomena, and in the mind as well to which this expression is addressed. Thus language has meaning in its very formation, and so meaning in its reception. Form-elements attach to things and actions aside from our conceptions of them; and they also accompany our conceptions of them even when the two—the conception and the fact—do not correspond. Here is the strongest possible proof of Infinite Reason. Nothing escapes it, or can escape it. All events carry with them the primary terms of reason, and address themselves to reason. The reason of man finds no chaos in

things, no unmeaning terms; and these essential terms of thought being present, there immediately spring up its secondary revelations. This is a fact exactly like that which makes language to be language. It has been constructed significantly in every part by mind, and so lies open in every part to mind. Form means reason, and reason means form, and form is universal.

Formal being is the being of forms, and hence it disappears with the forms to which it pertains. A good deal of German philosophy, like that of Hegel, is one of forms. Its generative process is that of reason, tracing in the products of reason the relations of reasons. But these relations can only hold between phenomena, and they no more explain the very phenomena than the meaning of a sentence explains the characters in which it is written. We cannot discuss meanings independently of specific languages, nor relations aside from some definite application. Hegelianism is virtually an attempt to make the general processes of thought expound the specific phenomena to which they apply, as if the word were a part of the meaning which it expresses. Thought cannot sink into absolute simplicity, and retain the power of movement; if there are not words as well as ideas, ideas find no expression. Mental relations give, like air and light above the tree, the direction in which growth may take place; but they do not expound the specific facts of that growth. Sensational, empirical facts as facts are not explained by the rational forms which they fill out. Form disappears with substance, and substance is intelligible only in and through form. Does this make substance an unintelligible and superfluous something? Not in the least; any more than the unit in mathematics is unnecessary because it is ultimate, and not like two and three a product of construction.

Is it true, then, that reason does not penetrate to the bottom of its own terms? It is true of the finite reason that it does not in sensation sink deeper than the sense; and the senses are present for the very purpose of giving the mind initiatory terms. In a higher realm, that of ideas, reason itself forbids an analysis that renders null its own insight. The idea of one is not helped by making it the half of two, or twice one half; the idea of time, by hastening or retarding to the imagination the flow of events under it. Reason, in this region, accepts by its own force first terms and the combinations of those terms.

The rational mind, dealing with phenomena which are to it ultimate terms resting on the inscrutable processes of sensation and the inscrutable facts of consciousness, finds in them the relations of reason, discusses them under these relations, and unfolds these relations in connection with them, both empirically and theoretically. The relation is neither so bound to the facts under it as to constitute a part of them, nor so independent of them as to be able to preserve its identity without them. These ideas give the highest example of form and substance. Phenomena are the sense-forms of forces, these ideas are the rational forms of phenomena. The form loses all being to the mind if it is separated from that which sustains it.

If now we turn to substantial being, that of forces and powers, it, like formal being, is evoked by the mind as something involved in the phenomena. Thus and only thus can the rational process of comprehension proceed. Phenomena have no coherence, no constructive significance of any order, save as they are regarded as a surface of expression above inscrutable and permanent energies that give rise to them. The meaning of words is not in the words as sensations, but in that which these suggest.

Deny this, and language ceases at once to be language. We speak of forces and powers as inscrutable. The word is conventional rather than truly significant. Forces, as the purely rational counterparts of facts, are known in the same degree in which these are known. The notion of substantial being is simply the necessary duality of our experience, and puts us in possession of our first contrast. That which is in the mind as phenomena is the counter of that which lies deeper in being. This affirmation is much of the same nature with that which ascribes an interior core to a block of stone. The comparison is to a certain degree, however, misleading. We feel that if we cut away the surface of the stone, we shall uncover another surface beneath it. We are apt, also, to think that the qualities of things are but superficial forms that might be replaced, if we could penetrate them, with deeper qualities. We have no right in this process of perception to suppose that if we could strip off one set of phenomena, the forces which give rise to them might, as an ultimate something, present another set wholly distinct and more profoundly true. Phenomena taken collectively fully measure and wholly express the forces concerned. We cannot dismiss these underlying forces from the mind and retain phenomena as intelligible facts. They become at once mere phenomena, and mere phenomena lead to nihilism. Phenomena are not interlocked by phenomena. Any and every notion of interdependence would themselves be simply detached parts of the phenomena. No more can we separate substances from the phenomena they support. So used they are unintelligible and unverifiable terms of thought.

Phenomena, it is said, are phenomena of mind, and hence the correlative noumena should be products of the

mind only. Consciousness is indeed the common condition of all phenomena ; mind is the inseparable term and the universal recipient. It does not thence follow that phenomena are exclusively the products of mind. Suppose we have four elements, oxygen, hydrogen, nitrogen, carbon. We can know the properties of one of these elements only in connection with the remaining three. It is the reactions between them that disclose them. The properties of water are not those of oxygen or of hydrogen, but of the two in their relation to each other. Is it, therefore, true that in these properties we know nothing of oxygen, but only something of hydrogen? or nothing either of oxygen or hydrogen, but something of water? In sensation we have complex facts which include two terms. Sensations are not all mental or all physical, or divisible into parts between matter and mind. There is that in these phenomena which the mind distinctly recognizes as the action and reaction of matter and mind. Nor does the fact of a pervasive consciousness alter this dependence. It is only the form under which it declares itself. The properties of water are not independent of those of oxygen, because they are always and wholly those of water, and never those of oxygen. The dependence of mind on matter in sensation is not such a portion of the facts of consciousness as to be simply a part of them and no more ; nor yet is it so independent of them as to be capable of disclosure without reference to them. It is not a sound inference that that which is experienced by mind is wholly its own in its sources. The universal analysis of experience does not sustain such a conclusion. Human knowledge, like an arch, rests on two abutments. By no possible means can its weight be shifted to one support, and this knowledge retain its own character.

The effort to accomplish this result seems to proceed largely from the false impression that a column has more unity than an arch, because it rests on one basis. The finite mind takes up the processes of reason after they begin to express themselves in distinct and primitive elements, and not as they lie in the prior unity of thought. Yet the human mind is not, therefore, forced into dualism, for the two terms of its experience are constantly coalescing into one fact before its eyes, and seem to have sprung up from one prior relation in reason. It is in this diversity of things that mind first finds variety, and then unity. The productive facts of being are the substantial forces and powers which, dismissed from the hand of God under one government of reason, carry that government everywhere with them. Taking our position among changeable phenomena, if we deny either the underlying energies or the apparent nature of the overlying forms, we extinguish the vision of one or other of the eyes of reason, and at once lose perspective.

The instant expression of substantial being is action. Interaction gives rise to phenomenal being. Phenomena carry with them appropriate forms--formal being. The essence of spirit is action; the Supreme Spirit carries forward with his action the phenomenal universe, and becomes to it substantial being. The phenomena of the universe give the space and time in which they occur, as the fiction of the novelist commands these form-elements. Space and time are infinite, not as absolute entities, but as form-elements. If the universe begins or ends, there is neither space nor time to anticipate it or to linger on behind it. Absolutely all things come forth from God and return to him.

A philosophy that discusses form-elements simply,—as



the notion of being—leaves behind it untouched and unexpounded phenomenal and substantial facts in their varieties and relations. This illusion has been common, from a very early period, in philosophy, the separation of the form-element from that to which it is a form. Thus the process of knowledge is made illusory by a breaking up of its composite conditions; and a few, fanciful mental relations are put in its place.

## X.

### FINAL CAUSES.

ANY extended movement in human thought implies correspondingly strong reasons as its impelling power. There has been, particularly among scientific inquirers, a decided disinclination to recognize final causes, and a disposition to confine attention to efficient causes, or causes proper. This tendency with some has gone so far as to lead them quite to shut out of consideration final causes, and to regard them as the fanciful creations of speculative minds; a class especially distasteful to those of an empirical bent.

The underlying and justifying ground of this phase of thought is the use which has been made of final causes, and the manner in which they have turned aside attention from efficient causes. A hasty judgment as to the purpose subserved by things collectively or singly has satisfied the mind, though its conclusions were wholly unproductive of any real knowledge of the processes concerned, or of any power over them. Control, service, are to be secured only by a thorough inquiry into antecedent and present causes. By the latter we are able to unite the current of events, and by the former we learn the method in which this is done. The productive power, therefore, of knowledge turns almost wholly on our mastery of efficient causes in their entire history. One who sees and feels this conceives a contempt for empty guesses at

the purposes for which things have been made, as if these surmises could either constitute knowledge or give power.

Those who have laid stress on final causes have often deserved the censure that has overtaken them. They have conceived the universe under the analogy of a series of acts of the human will, seeking its ends in a direct way, with little or no dependence on previous action or on the nature of the material employed. The conditions of reason are thus lost at once, and those of desire put in their place. They have gone in this direction far beyond human experience, and have made the arbitrariness of the divine procedure proportionate to the greatness of the divine power. Will has been the one condition of removing obstacles, and opening up creative paths. They have thus overlooked the Divine Reason, have overlooked the fact that each constructive act under reason gives conditions to subsequent ones, and that, unless reason retreats on itself, breaks up and overbears its own work, these conditions by extension and accumulation rapidly become the germs of all procedure, the material out of which is evolved and by which is determined all subsequent steps, precisely as we find it in the physical world. Each movement in a rational process is a modifying force in reference to each succeeding one, and so shortly we have an immense interlock of forces, which must be understood in the entire circle of their relations, and which no more express what has been done than what remains to be done.

The scientist has recognized this fact, has seen that the present is the chart of the future, and the past the chart of the present. He has ceased, therefore, to interest himself save in working forces, the very forces to which one must, in the end, come, if he is to make any speculation fruitful. These are means, and as means contain the ends,

and all the ends that he can in any way modify. This view has wrought a great change in inquiry, and a still greater change in its fruitfulness. The immense and complex processes which the universe involves have been in a measure laid open, and the light coming from the past has cast the shadow of present events on the future. Men have distinctly seen that the shadows lie on this side, forward, and not on the opposite side, backward.

This movement in turn becomes defective, when it pronounces the notion of final causes fanciful and passes them altogether; when it repudiates them as terms of profitable thought. It is this error that we now wish to lay open. The human mind institutes two sets of inquiries in reference to any thing offered to its consideration. How came it in its present form? in what relation does it stand to other things? This last question contains the inquiry: What purpose does it subserve? The mind is not satisfied with either of these questions disassociated from its fellow. Especially is it discontented with the first of them. They correlate with each other and give rise to each other. We should soon cease to ask how things came to assume their present form if that form had no constructive value, subserved no purpose. We can no more maintain our interest in things that have no relation to the future, than we can retain our estimation of money that has lost its purchasing power. It may be much safer, and usually is so, to find the purpose in the method, to discover the goal by tracing the path that leads to it, than to reach these conjecturally; but this fact should not hide the truth, that the purpose and the goal give light to the method and the path, that we should care nothing for a method productive of no definite or desirable purpose, or for a path which led us to no rational result.

In the material world all explanations, all processes of inquiry, are completed by an understanding of the order of the successive steps or stages by which any result is reached. In other words it is the combination of terms, themselves beyond comprehension, in a constructive result, that the mind accepts as knowledge. We explain physical phenomena by a detailed statement of their steps. We carry our analysis as far as possible. We reach the most simple facts possible, and then we see the order in which they are put together. It is this relation of simple, inexplicable terms that constitutes our knowledge. Suppose that we have reached an ultimate fact -- that is, a form of action so simple that we cannot subdivide it. Such facts, such actions, become our first terms. We know nothing about them in their inner nature. Indeed they have ceased to have for us any inner nature, by virtue of their simplicity. Their phenomenal value is their entire intellectual value. They express an energy that does this one thing and no more. We can do nothing with these first terms except combine them, and so understand the composite result in its method of production. We are like the mason who knows nothing about the stones he uses, and comprehends only the manner in which they are laid into a wall.

One of the most familiar of ultimate facts is that of collision, apparent contact between bodies, with subsequent motion and loss of motion. We know nothing about any reason why one ball impels another, how one imparts energy and another receives it, in what the gain and loss of energy consist. These are ultimate facts, simple facts, taken by us without farther knowledge. Indeed the desire to carry the analytic process, in which our knowledge consists, beyond its own limits, beyond all

limits, is irrational. The only explanation a simple act is capable of, is its own phenomenal form and the purpose it subserves, its fitness as a constructive term.

There has been a strong desire to reduce all facts, in final analysis, to facts of collision. We have thus as first terms impenetrable atoms, the motion of atoms, and their contact. The desire is unobtainable and unphilosophical. Not only are our first terms forms of sensation sublimated beyond the region of sensible knowledge, we have no knowledge that would enable us from these terms to reach or restore the complex variety of phenomenal facts offered to us in the world. We should find ourselves in the position of a mason called on to build walls of every variety out of a single pattern of stone. Our first facts must be numerous enough to expound all other facts by their combinations, otherwise we are thrown into the region of empty conjecture, and lose our later knowledge, our reflective knowledge, of combinations. If we had the simple facts of atoms, motions, and collisions, our explanations would shortly become as narrow and as barren as our material. We should ascribe arbitrary relations to these terms, and attribute differences to different combinations of them, without at all seeing how these combinations carried with them the diverse properties ascribed to them, and, much worse than this, not knowing that the forms, positions, directions involved really existed. Our attention would be directed to ingenious, supposititious causes of the diversity of effects. As all explanation consists in tracing the order of steps, we must be content to accept a sufficient number of elements to give this method footing. We must have letters wherewith to spell out our words.

Not only are we compelled to accept many simple facts

in the realm of mechanical forces, we find ourselves constrained to accept groups of phenomena, as in the properties of elements; and still other groups, as in compounds, whose constituents we know, but whose phenomena are by no means a mechanical admixture of the phenomena of the elements involved. We not only accept hydrogen and oxygen, we accept water as an ultimate fact in its properties. Science often seeks a simplicity, which, being attained, would at once compel it to make many an unwarrantable and foolish shift to get back the world of diversified facts which it had lost.

From this relation of our knowledge to the combination of simple terms, it follows that it would be far more correct to say that all explanation consists in the constant inclusion of final causes, than to say that it is found in their exclusion. It is order—sequence, numerical relations, the union of qualities—that we fully understand; but that order becomes order only in reference to definite, constructive results. If the mason heaps together his stones, but builds no wall, there is nothing to be known about his work. If there were no order in the universe, defined by a noble and beautiful product, we should have chaos not creation.

The reason understands acts of reason and those only, rational relations and those only. It does not understand a simple act, because there is nothing in it to be understood. All that can be known about it is its phenomenal form; and its suitableness to some purpose. Reason understands the world through its combinations, combinations that are made rational by including a constructive purpose. Shake out final causes, draw these threads of connection, and all things fall to pieces. Knowledge is lost and we are forced back to the beginning of things.

The one all-inclusive proof of a pervasive Divine Reason is the fact that we move everywhere freely in the universe because of coherent rational construction.

A good example of a blind and futile struggle with final causes is offered by the doctrine of natural selection, when urged as a sufficient explanation of the organic kingdoms. Its terms are a tendency to variation in all directions and the survival of the fittest. The second term is well-nigh a truism. It may as well be put the survival of those who do survive. The building stands because it is strong, but it is strong because it is fitted to stand. This is not said in disparagement of the dogma the survival of the fittest. To discern a truism and wisely use it is often the fulness of knowledge.

The obscure and insufficient term in this proof is the first one. How comes the living thing to be fitted to survive? How comes the building strong enough to stand? There is no answer to this inquiry under natural selection but accidental variation. That is, we fling ourselves back on accident for our one progressive, creative term. This is to strike out the foundations of knowledge. We obscure the sense of final causes, constructive agencies, orderly work, and hide them all beneath an infinite series of accidents. There are very many specific, empirical reasons why this method of explanation fails<sup>1</sup>; but all that we now have occasion to urge is, that the doctrine of organic evolution under natural selection thrusts aside final causes, and then strives to hide the error of its method by pressing a truism into the foreground. The very gist of the movement, profitable change, is swallowed up in a series of accidents. Against this method, aside from empirical criticism, there stand these rational objec-

<sup>1</sup> "Natural Theology," p. 136.



tions: (1) Accident can never be invoked to explain continuous and fundamental movement; it may explain sporadic interruptions. In this theory it is relied on for every step of coherent progress through two great kingdoms. (2) We have no analogy to sustain the form of accident we are employing. We cannot show that accident, the incidental collision of forces, is ever truly constructive, much less repeatedly and continuously constructive. Such an idea is contrary to experience and to rational expectation alike. (3) The accumulation of accidents into an order so comprehensive and extended as that of the organic kingdoms, would, even if we grant that an accident may be constructive, demand periods beyond all measurement, all estimate. These theoretical difficulties are sustained by the empirical criticism, that the organic kingdoms show no such range of accident, no such abundant abortions. The path of evolution is strewn with no such errors, a million failures to one success. Variations, true variations, are all constructive in different degrees, and demand each and all a constructive energy.

While, therefore, we freely admit that we do well to study purposes in the very means that are fulfilling them, to get our knowledge of a machine from the mechanism itself, we must also insist that the entire light of the process of inquiry in the world about us is the purpose subserved by every portion of creation, and by all portions collectively. Better the conception of Plato, in which matter is but the formless material for ideas, than one in which matter is at work without ideas.

## XI.

### HISTORY OF PHILOSOPHY.

THE inexperienced student in the history of philosophy is confounded by the multiplicity and variety of the facts which press upon his attention. He can make but little progress in his work, and experiences but little pleasure in it, till this difficulty is partially overcome, and he is able to make at least a provisional classification of the various forms of philosophy, and by means of it to see their relation to each other. No classification is entirely just or sufficient. Things, events, beliefs, do not fall exactly where we wish to put them. Our classes, in their divisions and subdivisions, involve some sacrifice of the force and variety of the differences which separate them, and some strain of assertion in the agreements affirmed. Yet these differences and these agreements are both better understood when contrasted and united in a system than they can be considered separately. Differences assume their true value in connection with agreements, and agreements enable us to see more clearly and retain more certainly the differences which accompany them. Moreover, the possible forms or limits of belief and the genetic force which they have over each other are thus best disclosed.

The purpose of the present essay is to assist the student in recognizing the general relations which hold between systems of philosophy, though these systems may not be

constructed throughout in harmony with the positions thus assigned them; and though the persons who constructed these systems might not have been willing, in all instances, to accept the designation assigned them. The value of the relations suggested will more than compensate this want of complete applicability, and the more certainly as attention is drawn to this deficiency. Few systems are so thoroughly consistent within themselves as to stand firmly with even poise on the logical legs which sustain them, while classification necessitates and means the oversight of secondary differences.

Ancient philosophy interested itself more directly in questions of cosmogony than in those of ontology, the being of matter and of mind and their connection with each other. It is these questions which lie at the basis of modern metaphysics. We must distinguish between physical phenomena, physical laws, and physical noumena, on the one hand; and mental phenomena, mental laws, and mental noumena on the other, in order to have the entire terms of the problem before us, whose solutions have been so diverse by diverse philosophies. If we accept all six of these terms as equally real, we are realists. If we accept phenomena and noumena as both objects of immediate knowledge, we are realists of the most direct and simple order. Hamilton and the Scotch school offer examples. If we accept phenomena as directly known, and noumena and the laws which unite them as indirectly or inferentially known, we are constructive realists. Of this form is the philosophy of Dr. Hickok.

Realism, while it is the unexpounded philosophy of the common mind, is thought to have this difficulty, that it so far divides matter and mind as to give no rational basis of interaction between them. This was regarded as the un-

expounded and obscure point in the philosophy of Descartes, and gave rise, in efforts of explanation, to the occasionalism of Gassendi and the preëstablished harmony of Leibnitz.

This mystery is easily magnified by those who fail to see, that subphenomenal action and relations are everywhere inapprehensible, not more so between mind and matter than between matter and matter. Philosophy, in a search for unity, has identified it with oneness, and has reached the unit by the boldest and most inadmissible suppositions. The most direct method is that of the materialist. He abolishes the problem in place of solving it. He assumes that all phenomena are phenomena of matter, and that facts of mind are only peculiar forms or aspects of those of matter. French philosophy, more particularly the philosophy of the Encyclopedists, has been of this order. The exceptions are secondary.

The English, while often inclining to the same conclusion, have not been willing to accept it in its direct and unguarded form. They have satisfied themselves with affirming an identity of laws in the two fields; with expressing the facts of mind in "terms of matter and motion." Such has been the tendency of English philosophy since the time of Locke. Spencer, while rejecting the imputation of materialism, and declining to affirm whether noumena are material or spiritual, expounds phenomena of both orders under one set of laws, those of the physical world. He thus becomes a constructive materialist. If the laws of matter and of mind are the same, the phenomena of matter and mind must be allied in a corresponding degree. If the dominant laws are physical so must the noumena be in which these laws inhere. Evolution, starting in the material world, cannot be made to

cover the spiritual world without first uniting it in being and method to that which lies below it.

Mill, without even affirming the existence of matter, expounds the facts of mind by the relations of experience, while the typical, fruitful terms in this experience are those known as physical, sensations and associations. Hence he may fittingly be termed an idealistic materialist. He is a materialist because the laws of mind are included in those of matter; he is idealistic, because he starts with mental phenomena, and does not definitely transcend them by the assertion of an external world. His materialism is constructive, because he does not affirm the identity of mind and matter, but constructs both sets of phenomena along one line of physical experience.

The method by which idealism strives to secure unity is the exact opposite of materialism. The idealist asserts the facts of mind, and confines knowledge to them. Material facts are but phases of mental facts. Idealism has pre-eminently prevailed in Germany, and has been productive of stupendous speculative structures. The relations of mental impressions, as the one arena of knowledge, the one field of consciousness, takes the place of a more or less blind evolution of things. Kant, whose philosophy gave occasion to the systems of the later masters of speculative thought, may be rightly termed a constructive idealist. Though he recognizes the thing-in-itself, both in the physical and mental world, he gives so subjective a character to all the actions of mind, ascribes to all formulæ so personal, so idealistic a nature, as to take from us any knowledge of the world of realities, and to transfer to the mind simply our plainest ideas and most explanatory processes. The next step could not be other than idealism. If we deny the objective validity of the form-

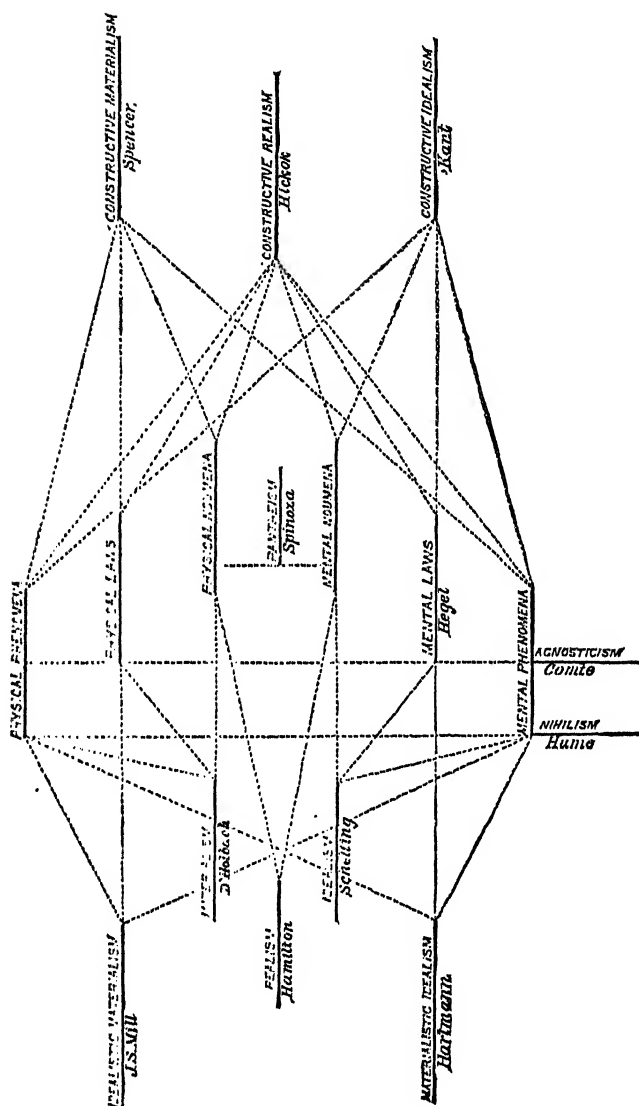
elements on which all our knowledge depends, we have wiped out the physical world. Pure idealism followed quickly in the works of Fichte, and found its most consistent expression as the development of Absolute Mind in the philosophy of Schelling. Hegel gave it a more thorough and complete form, by the acceptance of mental laws, as expressed in mental phenomena, as the one genetic process. The development of the reason within the reason is the all-inclusive and absolute movement.

Later German philosophy, without escaping this powerful idealistic tendency, has also felt the force of scientific thought. Schopenhauer and Hartmann have combined the two. Will and intelligence are ascribed by Hartmann to things, and are made, in the evolution of the physical and the organic world, to present facts and laws of mind. This development finds its completion and highest expression in man. This is the philosophy of the unconscious, and the conscious is only the last term in the unfolding of mind. This philosophy is one of pessimism. Human life is simply a realization within consciousness of unsatisfied tendencies, insatiable desires. This philosophy may be termed materialistic idealism, as the distinguishing features of mind, will and thought, sink to the very primordial basis of things, and thence take up their lines of development through the physical world.

Idealism has found little acceptance in England. The idealism of Berkeley consisted in carrying over the inference of objective being, which starts from what we term sensations, directly to God. Instead of admitting the intervention of matter, sensations, perceptions, are referred immediately to God. Thus Malebranche held that we see all things in God. The difficulty which forced thought into these obscure channels was that which attends on the

interaction of matter and mind. Spinoza solved this problem by a thorough-going pantheism. He united physical and mental noumena in an absolute substance, with the double attributes of extension and thought.

These constructive embarrassments of human thought have given rise to corresponding scepticism. The most radical form of unbelief is that of Hume, is nihilism. It recognizes phenomena only. The mind, or rather the stream of mental impressions for which it stands, can in no way transcend itself. No affirmations can be made which are not themselves additional phenomena simply. Reasons are only a portion of that they strive to explain. There is no reason that presides over and judges the impressions that are present to it. A less-sweeping denial is that of agnosticism, that of Comte, Littré, Lewes. Phenomena and the laws of phenomena are accepted, but noumena are denied; with them disappear theology and metaphysics. If, however, this positive philosophy attempts to discuss the grounds of its affirmations and denials, the discarded conceptions reappear. We tabulate these results. The straight line indicates the leading element in each system, and the concurrent dotted ones those united to it as secondary in value. Thus in constructive materialism, physical laws furnish the ruling idea under which all phenomena are explained. In materialistic idealism mental notions, as will and idea, are traced in physical and mental facts. Constructive realism gives equal weight to all six terms, and realism gives special weight to noumena as objects of immediate knowledge. Spinoza united noumena in one absolute being with two sets of attributes. Hegel wrought out his philosophy from one term, the laws of thought. Sceptical systems are placed at right angles to positive ones. The diagram





thus emphasizes fundamental distinctions, and helps to retain them.

The same results may also be expressed as a classification :

Systems of Philosophy	Dualistic	{ Realism	
		{ Constructive Realism	
	Monistic	{ Materialistic	{ Materialism
			{ Constructive materialism
		{ Idealistic	{ Idealistic materialism
			{ Idealism      { Absolute being
Sceptic	{	Pantheistic	{ Absolute process
			{ Constructive idealism
			{ Materialistic idealism
{	Nihilism	{	Agnosticism

## XII.

### A PHILOSOPHY OF HISTORY.

A GREAT river offers a conspicuous example of innumerable and obscure, yet determinate and obvious, forces present in a plain, yet immeasurable, fact. It is a favorable example of the concurrence of many conditions, remote from each other in time and in place, in a result which, in despite of delay, change, and variety, is of a very assured order. It presents, moreover, an illustration of a constant characteristic of human knowledge, when applied to complex facts: the general conditions and forces involved are readily understood, while the precise form in which they are at any one moment offered to us is quite beyond our scope of apprehension. Distant mountain ranges, snows, rains, forests, the character of soils, intervening plains, temperature, climate, the silt the river carries with it, the marshy levels that delay it, the rocky beds that precipitate it, the geologic events long passed which outlined the regions through which it finds its way,--these are a few of the more obvious conditions which concur in its general formation and precise states.

Human history is the most extended, the most mobile, the most complicated conjunction of near and remote energies which anywhere offers itself to us. The physical, the intellectual, the social, the spiritual worlds are all put under contribution to furnish its controlling forces, and

all find their latest, fullest, and most subtle expression in it. Human history, like the river, is not to be perfectly understood and measured in any one movement or at any one time in the nature and the sources of the forces taking part in it; it is to be comprehended, so far as it is capable of comprehension, under general conditions and primary impulses, which disclose themselves here and there in definitive states and decisive currents. Each drop in the river has its own history, feels its own impulses, imparts its own influences, while we can only observe in a gross way the final results. Each individual in human life is the centre of far more complex, more remote, and more obscure causes. These we cannot trace; much less can we combine them into a tribal, national, or race movement. We can only grasp at them in their general characteristics, and recognize them in a general way in the results that flow from them. Human knowledge is not a continuous accumulation of exact facts, but a wise exclusion and inclusion of particulars, by which a oneness of idea and relation is found in an infinite diversity of manifestations.

Simple change, even though known in its items, expounds nothing to the human mind; there must be some law of change, some direction of change, by which new and more constructive relations are reached. History, in its explanation, involves the idea of growth, of definite change in its highest form. This growth must express itself in the increased perfection of the individual on the one side, and of the community on the other; or rather in their mutual, interdependent, interlocked perfection. As the highest consumption and use in the world centre in man, there can be no development, no satisfactory growth, whose cardinal features are not power and purity in character, scope and joy in rational life. All ministra-

tion fails which is not gathered into this consumption, and saved by means of it. Labor that is sunk in diseased and joyless life is lost in its last stages; the ship is wrecked as it enters the harbor.

As individual life expands itself with the common life, the perfection of the one involves the perfection of both. The moral law is the social law, the law which rests on man, man with man. Common development is moral development; and moral strength is the force of the common life. We find no more perfect image of that social growth which is the product and goal of human history than the organic unity of the body of man. Each organ owes its perfection to the common life, and contributes in turn its own perfection to that life. There is one pervasive activity and pleasure in these organs, and for them all. There is here no function which is not one of ministration and of reception, which is not defined by the part it plays in one whole.

Human society is the highest organic unit which has as yet appeared within the horizon of knowledge; and the perfection of this life,--the coming of the Kingdom of Heaven--and, as coëxtensive with it, the perfection of individuals, families, communities, nations, races, become the all-inclusive result which is to embrace and to expound all other results. If human history is inexplicable, knowledge reaches no goal; if human history is explicable, the physical stands explained by its relations to the spiritual. And the spiritual is gathered up in that complete organic growth known as the Kingdom of Heaven. The Kingdom of Heaven is the highest expository idea applicable to human history; and thus the highest idea applicable to that broad and complex stream of physical and semi-physical causes that flow on with it and sustain it.

Directing attention then to the Kingdom of Heaven as the most comprehensive and suggestive expression for human society unfolding under the law of love ; human society everywhere active in thought and restful in affection, every moment pushing outward in fresh acquisitions and building itself within in free participation, we have in this kingdom the organic unit of which individuals, classes, communities, nations, are organic portions. This image, though only an image, may greatly aid us in a philosophy of history. We do not aspire to a philosophy of history that weighs all the facts involved, or measures all the causes concerned. Such an effort is futile and deceptive. We shall be satisfied if we catch sight of the unity of method in progress, its certainty of direction, the leading agencies active in it, and special forms in their manifestation.

A function and an organ are inseparable. They grow up together. The function gives occasion to the organ, and the development of the organ supports and completes the function. Thus the nervous system, as the general organ of interaction in animal life, has grown with this interaction in reciprocal increase and interdependence. The interaction preceded the system, and yet the system has, at every step of progress, determined the interaction. The same is true of a special sense like that of sight. The whole animal body is in one way or another sensitive to light, but a pigment spot becomes sensitive to it in a peculiar way and degree. With the growth of this sensitivity a new organ, a special sense, and a peculiar function make their appearance, standing in relation to each other and to the coördinate, coëtantaneous developments of the living being in the entire circle of its life. The need of the function, is found in the general relation, and the

partial presence of the function gives occasion to the continuous unfolding of the organ.

This image is sufficiently exact to subserve the purposes of comprehension in the growth of society. Society has its powers and sensitivities, its functions and its organs. The life of society is one of varied, extended, and partially harmonized interactions. It, therefore, like all organic things, must grow by means of organs that expand under functions, by functions that are increasingly sustained by appropriate organs, and by a unity of functions and organs that removes conflict, creates step by step new and more perfect dependences, and rests its gains at every stage on all that has gone before.

We first point out under this close analogy some of the organs of social growth, which, by sustaining appropriate functions, give the conditions of the Kingdom of Heaven. We speak of them in large classes rather than in specific forms, not caring to dwell on the relations of resemblance which might be readily traced between these organs of the social body and those of the body of man.

A large class of social functions finds its conditions of activity in natural agents as modified by man. These are the organs of social powers, and the two determine each other. Thus a region that has received varied, skilful, and well-sustained tillage for a long period comes to possess great productive resources. It easily calls out and abundantly rewards the labor by which its fertility is determined in direction, enjoyed, and increased. These results are the expression of wise, diversified, and continuous husbandry. Progress in one form of cultivation is made to sustain that in other forms. Not only is the capacity of the soil altered, not only is the productive power increased by permanent improvements, new sources of ferti-

lization are found ; variety in crops and a variety of farm appliances aid labor ; while the vegetable and animal kingdoms are permanently modified in their relation to each other and to man. Domestic animals are multiplied and improved ; vegetables are made more nutritious and grains more productive ; fruits become more enjoyable and flowers more beautiful. The skilful and affectionate hand of man reshapes to his own purposes whatever it touches. There thus comes to be an extended modification of the natural agents with which he has to deal, greatly adding to their economic value. This process in irrigation and in forestry extends even to the alteration of climate, and the change of great natural features.

In like manner, more obviously but not as profoundly, manufacture builds up the means of its several processes, prepares the way year by year for more extended, more varied, cheaper, and better production. The plant in buildings, motor-powers, machinery, and tools determines at each stage the forms of labor and its results, and these forms and results become increasingly complex and complete. The spirit of discovery and invention adds gain to gain, ease to ease, and each branch of mechanical labor offers new facilities to all branches. This ingenious and productive temper, making active and effective the thoughts of a great army of laborers, builds up a world of its own, whose cunning processes and rapid movements are a startling multiplication of human powers. Here is an organ of society, which conspicuously alters its external features, and profoundly affects its internal temper. The great city and the unbroken forest are not farther apart to the senses than are the citizen and the savage, tenants respectively of the one and the other.

An allied group of organs lying in the same direction

and furnishing like marvellous conditions of activity are the appliances of commerce. Ships, steamships, harbors, wharves, and storage, with all the conditions of safety and defence, express great resources and correspondingly enlarge them. Roads, railroads, stations, depots, postal systems, telegraphs; stores, banks, currency, are the organs of a life in rapid and increasing interplay within the nation and between nations. If we look at such a country as England, in which this form of activity has found its most extended development, we at once see what complex conditions of commerce are the products of commerce, and what fresh incentives they bring to commerce. In every stage of growth, the organ and the function have sustained each other, and become inseparable terms in development. The means the world offers at any one time and place to production, play the same part in the specific unfolding of a nation, and of collective human life, that activity and nutrition perform in the animal organism. The forms of organs, their combinations and ministrations, are not the simple results of action and nutrition, though action and nutrition accompany them in every stage of growth. The organ and the function explain each other to this extent: when the two are established, directed, and sustained by the common life, they mutually modify and quicken each other, the function taking the lead.

Another group of organs in the progress of civilization is the modified physical organization of men, as they form themselves into distinctive productive classes. The mechanism of the machinist is not more needful, more a specific thing, or more permanent than the machinist himself; the ship than the sailor; the bank than the banker; the law than the judge who applies it. In speaking of the various classes of men in production as organs



of society, we refer to their physical organization as permanently influenced by their respective kinds of labor, and in turn giving that peculiar efficiency which belongs to experts, even when the direction of effort is primarily intellectual. To endure without injury protracted thought, to move with facility in any special line of thought, to bear without flurry the rapid change of attention incident to a complicated business, to undergo without strain or loss of cunning the exertion of special muscles for a long period or the action of particular senses in nice work, to bear without overpowering fatigue severe manual labor, imply a specialized and well sustained physical development, which, in its many forms, can only fall to different classes as the result of protracted training. The common organization is so far modified in different workmen as to render the work impossible without the modification. The function carries with it the change, and the change improves and imposes the function. The power to do one thing well limits the power to do other things, and assigns an organic office. Productive classes are classes by virtue of more or less extended and permanent physical changes, closely united indeed with intellectual ones, but not identical with them. Classes are thus specialized, and maintain to society as a whole the relation of organs; a specialization of slight and of large degrees, and of great variety.

A third group of organs, more subtle than those now mentioned, but not less significant, is made up of those habits of feeling, thought, and action, those social customs which have force with men quite aside from any direct appeal to the judgment or the conscience. These prevalent sentiments are the deposit of previous social life. They are the inertia and the momentum of that life,

They make change slow and orderly; they resist it and they receive and sustain it. The masses of men in society are to a few active minds what the body is to the spirit. The body restrains and weights the spirit, and yet makes it coherent and efficient in its action. The framework of society does the same thing for the more erratic, brilliant, and progressive men in it. It turns influences into customs and conventional opinions which will or will not give way to new forms. They are *quasi* physical facts which express what is immediately possible in collective action, what men in that collective capacity know how to do, feel the need of doing, and, on occasion, actually will do. When speculation transcends custom, it is, for the time being at least, an inoperative and vagrant power, like a natural agent in production that is outside the range of applied forces. Conventional sentiments and customs are the fixed conditions which society forms within itself in directing and holding fast its otherwise divided and sporadic energies.

Customs express themselves in less permanent and more permanent, less authoritative and more authoritative forms, in manners, in social relations, in religious action, in laws, and in civil institutions. No institutions can long sustain themselves which are not in harmony with social sentiment; social sentiment furnishes the actual forces that are to work under them and execute them. It is the habitual relations between men, as men conceive them, which are to find expression in institutions, at least so far as these institutions look for support to those subject to them. By conventional sentiment we do not mean opinion in the process of formation, but that already formed and prevalent, that which has the force of a fact to be encountered at once by any social

action wherever put forth. Its existence is of the same unavoidable order as climate. Thus the castes of India, the convictions of the Jews, the restrictions of the Mohammedans, are, to those who come under them, as real in their controlling power as if they stood for physical instead of spiritual forces. Public opinion is a more mobile product of a relatively free country, a conviction in the process of formation, and which has not yet passed into an unquestioned social sentiment.

Manners and the limits of intercourse between persons and classes are the earliest products of social sentiment. These, for average minds, present as stubborn conditions to action as any which they encounter. Their lives at once take form under them, and their feelings are shaped by them. These distinctions become the great features in the spiritual consciousness of those who are occupied with them. The various divisions in a community, and the social and economic ways in which they are united to each other, are facts of this order. Religious beliefs, rites, and duties are a specific direction of social sentiment in its higher forms. Though it belongs to the individual judgment and conscience to renew and reflect these religious impulses, like other social incentives, they easily become unquestioned. Government and laws, those rough outlines of order on which the more pervasive interdependences of society are made to rest, are the more important organs of social development. Social construction tends to become homogeneous within itself in its several branches, and the organs of this life condition the functions they perform, and are, in turn, conditioned by them. There is a vigorous interaction between each organ and its function, and between the united functions which express the social state. The cardinal fact for us

is, that the spiritual life in a community is for the time being guided and guarded by social sentiments, customs, laws, which mark the present stage of growth, and are to be reshaped for succeeding stages. No better example can be offered of this dependence than the development of a cabinet system in England. The growing spirit of freedom demanded the increased responsibility of the executive power, and the effort to secure this slowly gave rise to a very peculiar and effective means of its accomplishment.

Having thus indicated, under the extended applicable figure of a living body, those social products which perform the service of organs, we have to speak next of the functions associated with these organs. The distinction between an organ and a function is a supersensible one, and an early constituent in the differentiae which separate vital and mechanical processes. A machine has properly no functions. There is something which each part was intended to do, and something which it does; but this *quasi* function has no power to react on the mechanism for its improvement, and stands in no living connection with the office of other parts, in the more inclusive whole. The office of each part follows after its construction; it neither initiates it nor guides it; the relation between the mechanism and the labor performed by it is instituted by the machinist. A function proper is a service rendered to a living organism by a portion of that organism. It implies a want which belongs to the life as a whole, and one which reacts in incitement and guidance on the organ which fulfils it. The unity of the living thing assigns the several offices, and nourishes and directs their respective organs in a single circuit of increasing precision and perfection. This is the fundamental relation in life, and the fundamental relation in development.

In the animal this dependence of functions is automatic, a part of the secret of life ; in society it remains partially automatic, but it also comes distinctly into the region of consciousness and voluntary activity. The functions in society of its several organs are conscious impulses which give rise to these organs. The organs fulfil a purpose, and that purpose is present, though often obscurely and intermittently, in the minds of men. There is no common consciousness in society, no physical centre or circuit of life. When we speak of a common consciousness, we can only mean sentiments which are familiar to those who compose the community. The body-social has a strictly spiritual centre and circuit of organization, and to this degree the words "organs" and "functions" are figurative. They are the terms of physical life transferred to spiritual life ; and yet to a spiritual life which is constructing a very definite product in physical and *quasi* physical forces.

Functions in society are connected with and expressed in a consciousness among men, though one often partial and obscure, of the purposes to be subserved by the organs of growth ; a consciousness sufficiently of the nature of desire to lead to the required directions of effort. The impulse springs up within the region of consciousness, and is prevaillingly rational. The forces active in the social organism are the most intelligible of all forces, and carry with them the plainest forecast. Thus, the fixed results which attend on agriculture, manufacture, and commerce are due to a direct pursuit by men of their own extended well-being. In that search nature is put to permanent service, and their own physical powers are specialized. Individuals and classes in the community, in winning and holding what they are determined to make

their own, gain for themselves and give to others social sentiments fitted to support their action. The social organism arises under these convictions, and is changed with them and by them. The several organs of society fulfil these purposes by gratifying incentives planted in the conscious life of man. These ruling incentives may be somewhat remote, in the general consciousness, from the institutions which constitute the organic framework for them, but the prevailing impulses none the less carry with them the corresponding organic relations. Any material change of organs must reshape the familiar forms of social life. Thus at present society is very slow in opening new directions of instruction and action for women, so conscious is it that old sentiments must at once suffer modification. It has a shuddering fear of organic changes, trespassing in so many ways on familiar feelings. The idea of growth does not quiet its childish alarm.

While intellectual life is the true life of society, it beds itself so rapidly and so deeply in the physical and semi-physical facts which sustain it and are built up with it, that it loses the freedom of intellectual movement, and settles down into the phlegm of a strongly declared organic state. Intellectual life does not, for this reason, cease in society, but it is compelled to cover both space and time and gather volume before it can make itself felt in any new way. Most of the changes it induces are slight and well illustrated by the concessive varieties in an organ under the new demands of function.

The second functional element in society is the spiritual sense of spiritual excellence which accompanies it. Intellectual action may be called out in the fulfilment of desires,—these we have spoken of as the first functional forces—or it may be called out by the pleasure which the

mind takes in truth, in beauty, and in right. While these are higher impulses than those furnished by the desires as based on appetites and social feelings, they cannot be separated from them. The higher functional forces unite themselves to and modify the lower ones, and organic structure—especially that which is represented in social customs—receives corresponding modification. Truth, beauty, and right become conspicuous laws of human action as it spreads over and fully occupies the field offered to it in the physical and social conditions of life. The lower impulses are in no way lost, the field in its primary features is not altered, but the method, spirit, and purpose of the labor are translated and transformed into a higher region of thought. Truth and beauty and right can only make their presence obvious as they rule a complex life of extended physical activity and social desires.

The supreme form of these supreme impulses, which slowly struggle into being, is expressed in morality and religion. The mind, in its moral activity, discerns and enforces the lines of conduct which should unite men in society; in its religious action, it discerns the larger and kinder affections which bind men to God and thus to each other. The reason of man works organically in society by declaring those laws of duty, which first reconcile the actions of men one with another, and later unite them in pleasurable and beautiful ministration to each other. This effort after a common life loses, however, its chief promise and predominant motives, unless men find its conditions as a constitutional law already in the world; unless they see a profounder reason and a more pervasive insight and a more persuasive power than their own, proposing the same ends and pushing forward by like means toward a concurrent state in nature and in man, —

toward the Kingdom of Heaven, in which the wickedness of the individual shall be overcome and his weakness removed by a life at once personal and general, free and forceful, diverse under distinct impulses, and harmonious under common purposes, all wrapped up in the perfect unity of the affections.

The spiritual perceptions of men have always had one field, the harmonious action of man with man, though they have worked very narrowly and obscurely in that field. Now that the goal and the means of its attainment have been distinctly given, as in the two laws of love, the scope of these laws is still quite beyond our measurement and our fulfilment. The insight, however, which comes to the mind on various occasions for the shaping in this direction of specific forms of action, is the awakening functional activity which impels spiritual, organic construction, more especially that involved in social sentiments, customs, and institutions. All growth comes slowly, with retardation and decay; spiritual growth springs up in connection with errors, prejudice, and perversion. It suffers the evils and delays incident to conflicting passions on the one hand, and dormant affections on the other.

Organs and functions, while partially explaining each other, are only to be fully understood as parts of a living organism, and a living development. The more comprehensive relation expounds the more limited one; so is it in society. Society as a whole is the product of a conjoint development, which unites specific functions and carries them forward as parts of an expanding, social life. We have thus in men collectively the same evolution which we find in the biological facts of the world, and in man individually. This evolution is equally an involution, a gathering up and inclusion in one comprehensive



process of all conditions, physical, vital, and spiritual; the spreading of human life upward, outward, and downward, till it puts "in act and will" all the things about it and within it. We cannot understand human history save as we find in it a growing unity, extending not merely to the spiritual world, but to the physical world also; a unity which offers the highest centre of relation to all visible things, and one at which the visible passes into the invisible, and combines with it in the Kingdom of Heaven. This growing power of the common life is well shown in the strong way in which it has laid hold of railroads, telegraphs, and the daily press; and found in them a sudden increase of thought.

It is this social evolution which offers the last term of explanation in human history. This evolution involves, first, a constant, subtile, and extended reaction between organs and functions as parts of one living process. This interaction is exceedingly plain so far as society reshapes for its own purposes natural agents and the physical structure of its several classes of laborers. Political economy is full of this interdependence of the processes of production, their increased specialization, and their concurrent growth. It is hardly less obvious that customs, institutions, and laws will modify each other, till they come to fit some one form of life; and that productive labor must receive its direction and its efficiency in connection with these social conditions. What different classes shall arise in the community, what they shall desire to do, and what they shall be able to do, will be determined by social institutions. Such a fact as slavery settles at once most of the industrial problems of a state. It is the relations between producers and the social states of producers that are expressed and confirmed by institutions, and that are

modified by any fresh functional activity either economic or spiritual. The life is more than meat in this particular: that the direction of the life must predetermine what is for it meat and drink. In any community, the impulses which guide and sustain exertion are vested in conventional sentiment, and in the hopes which can spring up under it. What is true in any one nation comes to be slowly true between nations. International law and international life arise on this higher moral plane of activity, on which nations do not enter till development is well under way.

This unfolding of society is marked by a second characteristic of evolution: each step prepares the way for another. Indeed, this is so true that men are often tempted to precipitate the movement in a revolutionary way, under the conviction that many changes are urgent, and that rapid improvement is open to them. In the force of this conviction they lose sight of the correlative truth in organic development, that each step is one of extended reactions, and that any advance before these are complete is at the expense of living power. In no direction is the goal more remote than in human history, nor to be reached by a more numerous series of transitions. The objections to reform also often proceed from an oversight of the same truth. The conferring of new rights, as of suffrage upon women, is resisted on the ground of incongruity with present characteristics and duties. The objection forgets that the excellency of each step of well-ordered progress is, that it begins at once to reshape in a harmonious way all things to itself.

A third characteristic of this growth as an evolution is, that each step accumulates the conditions of progress. Nothing has the same ease of movement as fortunate life. Social growth takes place by insight and concession, and

insight and concession gain momentum. Quicker insight is supported by deeper knowledge, and ready concession by enlarged affections. The horizon of truth grows rapidly with each additional foot of height, and the feelings outrun the thoughts. Moreover, the conditions of progress are increasingly present; the acceleration of social life is even more observable than of individual life. The acquisitions of each class spread as new possibilities and new stimuli into all classes, and these secondary gains again return as a new force to broaden the primary movement. Life grows like a circle through its entire circumference. Desires and powers multiply at every step, and the gains of a few, if they are just gains, minister unexpectedly to the gains of all.

A fourth fact of much interest in this evolution, is, that any failure at any point in progress, whether it arises from exterior accident, as overthrow of war, or interior weakness, as luxury and injustice, simply throws the movement one or more stages backward, or shifts it to some new position, and renews the problem of progress afresh under these altered conditions. The effort, like that of the spider to fasten its web, may need to be renewed many times; but there are permanent incentives to define its proper limits, and bring it to its accomplishment. A clearer consciousness and more rational impulses grow out of each failure. The overthrow of the ancient world sowed the soil of the modern world with the seeds of a civilization far more humane and just than that which it replaces. Time is an inexhaustible factor in this evolution; and disaster prepares the way for success, as certainly as the decay of lichens, mosses, and ferns gives the soil for shrubs and trees. As long as functional activity in society is one of intellectual and emotional insight,

that insight will be deepened and broadened by experience. With the ancient is wisdom, and in length of days is understanding.

The reverse of this truth, the impossibility of a permanent social adjustment which does not rest on beneficence, is seen just now in Ireland. The unrest here is not due to titles vitiated in the outset by violence. This evil, time has often cured. The chronic anarchy of society is referable to the fact that no civil and social and economic relations that are truly organic, have grown up between classes, covering and combining the interests of all. Hence productive industry and social life have failed, and fear and force have taken the place of interior impulses.

The collective growth of the race, having these characteristics of an organic evolution, is also watched over and pervaded by a supersensuous presence, a single centre of life. This is seen in the fact that the whole movement is begotten in the concurrent forces of reason, and borne on by them. It is seen also in those convergent physical and social laws by which it is momentarily sustained. One cannot trace any great events in human history, like those which led to and completed the American Revolution, without observing how often the movement appears to hinge on secondary occurrences, and a balance of circumstances which seem first to have been shaken in the cap of fortune and then to have been poured out. Yet under all these fortuitous elements; under general principles, deeply implanted tendencies, and a favoring conjunction of conditions, the stream of history flows on to a normal conclusion; like a river whose current is shaped by eddies and stagnant pools and sluggish lagoons, as well as by deep depressions and mountain ranges. One could easily select, in the struggle referred to, a hundred events having the

force of special providences in their contribution to success. Law and accident find a conjunction and government equally conspicuous in the growth of living things.

A still more obvious way in which the accumulated insights and impulses of spiritual life are pushed onward, is the ministration of genius. Direction is gained by the presence of one or more who can open a channel for conflicting opinions, and lead them forward. The action of a Divine Providence is conspicuous in its messengers, its prophets and apostles, who enter by fellowship into the secrets of the work of God. As the inspiration of each soul in this higher realm is its sympathy with the righteousness, the wisdom, the grace of God; so in turn God is present by such servants in peculiar power to bear forward his kingdom.

Herein is a chief reason why the involution of all the world in the Kingdom of God may be looked on as an organic growth. Not only are there extended physical and social constructions which play the parts of organs; not only are there present in the common consciousness increasingly clear and discriminating impulses which perform the office of functions, and stand with their respective organs under all the conditions of inter-dependence and development; not only is this movement made concurrent by belonging to one race under the same laws with one range only of operation, this growth is pushed forward by a secret supersensible life, which is at least analogous in its operation to that plastic power which rules the body of man.

“ Wisdom and spirit of the universe !  
Thou soul, that art the eternity of thought !  
And giveth to forms and images a breath  
And everlasting motion ! ”

Man does not create those relations which unfold before him. He does not throw up that imperial path which he traverses. He does not make the truth by which his own spiritual life is made. Nor do those truths which are to be the framework of perfected human society exist in any way as facts, as parts of any construction yet reached. This invisible presence of truth abides with the invisible spirit, and comes forth slowly to man and for man by fellowship and insight. We are under the reign of truth. The Spirit of Truth, the Divine Spirit, holds in their unity and in their constructive force those spiritual intuitions and impulses which, already at work in the universe and in the soul of man, are to build up the Kingdom of Heaven. Organs would be without confirmed relations, functions would be wayward, and growth vacillating, were not all combined by one Spirit of Truth—the Soul of the spiritual world.

Herein are found the deepest differences in philosophy. Some men direct their attention so carefully to the forms of things as to lose sight of the true significance of form. Facts must, indeed, be known, but simply known as sensible facts, they are not thereby understood. Comprehension involves the presence of a supersensible idea or law of some order, under which they are recognized as arising. A mere conjunction in space, or a mere sequence in time, are simply conjunction and sequence. Their interest must still be found in deeper relations and reasons expressed in them. The facts as facts explain nothing. They are the material offered to the process of explanation. The conjunction, for instance, of organs and functions in a living body, is the very problem which addresses itself to us in biology. The most lucid possible statement of the facts only increases the marvel they contain. Cer-

tain characters in a certain arrangement do not constitute the great fact of language ; nor does the simple sequence of sentences make up the gist of logic. The form of explanation sometimes adopted in biology, pushed to its legitimate results, would set aside the whole explanatory process. It is meanings, the supersensible ideas involved in the facts, that are addressed to reason ; and that because they express reason. We cannot construct language out of linguistic symbols merely. Nor can we so much as secure the symbols even by themselves. The plummet of thought cannot create a deep sea of thought by being dropped at random. The exposition of the world is a rational process only because the world is a rational product. Otherwise what we term knowledge is either a simple reflection of the naked facts ; or a personal and fanciful symbolization of them, as when one speaks of the language of flowers.

Herein is the solution of the natural and the supernatural. The natural is the beautiful thing it is because it holds the supernatural— a supersensible and free element. The supernatural is the Divine Life that it is because it steadily bears forward the natural. What life is to the living thing, that the Divine Reason is to the physical forces, organic impulses, social relations, intellectual insights, and pure affections which are united in the growth of the human family. The philosophy of history is, then, a disclosure of the movement of society toward its most comprehensive form, harmonizing its industrial and spiritual functions with each other in perfected organs under a supreme spiritual law, offered in a threefold form as truth, beauty, and right, and nourished by a Supreme Reason. The force of this development comes forth from the creative thought of God—the Spirit of Truth.

With these three terms before us—organs, functions, and inner life—we have the conditions of an ever-unfolding reaction between them. Fresh insight calls out increased intensity of functions, and functions readjust and build anew organs. On the other hand, every gain in organs offers new possibilities, new revelations, and new impulses. There is in this evolution both natural and rational selection, pushing each other forward. Only that organization can permanently prosper in society which is beneficent, and this beneficence will disclose itself as a fact, and in the principles which occasion it. History and insight, therefore, will more and more unite in the beneficent act.

There are certain laws or principles which plainly belong to this spiritual development of the race, both as studied in its underlying forces and in their actual presentation in history. The first law we adduce is that of continuity. The several stages which constitute growth are, and must be, closely united with slight and successive transitions. In this law the growth of the race is like all growth, and presents this essential condition in one of its plainest forms. This law, in its application to biology, gives rise to the fact of evolution—recently enforced and illustrated in so many ways. No community can make, in its social development, any violent or extended transitions. The new is enfolded as an embryo in the old. The old drops away before the new, which it itself has brought forth largely in its own image. Life, as a permanent fact, turns on a nice balance between powers and difficulties, and the readjustments incident to growth are made point by point along the entire line of interaction. If society is to be reconstructed, every class and every individual in every class must be reshaped by new sentiments, new customs,



and new forms of labor. This change can only be gradual, and must be continuous, if society is to maintain a safe equipoise within itself at every stage. Life remains life and the same life in all its transitions, and life is a complex and delicately adjusted system of interactions. Till each class discovers its proper relation to other classes, and has harmonized its action thereto, society remains anarchical.

The illustrations of this law are very numerous. Many and advanced principles were brought before the English people in the revolution which overthrew the monarchy under Charles. These principles, though coherent among themselves, were too numerous and too novel for the acceptance of the average Englishman. All classes were not ready in all relations to readjust themselves under them. Hence, while they acquired for a few years great destructive power, they were unable to bring reconstruction; a violent reaction set in, and two hundred years have hardly sufficed to occupy the territory in social growth so rapidly mapped out in sanguine minds.

The violence of the French Revolution cast down at once and extendedly old institutions. A return to the old régime was thus made impossible, but equally was a new régime impossible. The result has been that the French nation has sought in vain for nearly a century a centre of permanent organization, and now after innumerable reactions is just beginning to show more organic strength. Theories have been rampant, but it has been found impossible to shape national sentiments, customs, and institutions to any one of them. The lost balance of existing forces could not be restored. The reconstruction of convulsive revolution has cost a century of vacillation.

In our own Southern States the fixed relation of classes

was broken up by the last war. Urgent as the necessity for reconstruction has been, and intrinsically just and beneficent as have been its conditions, the life of one generation has been chiefly consumed in resistance, and the new terms of growth are only slowly disclosing themselves. Old relations were broken up, and neither of the two great classes in production were ready for new ones.

The decay of institutions may be equally slow, as shown in the gradual loss of popular rights in the Roman State. The irreconcilable character of English and Irish sentiment is often urged. It arises from the fact, and has also given occasion to it, that no continuous terms of just and profitable production have ever been established between the two races. There are no forced marches in civilization.

A second law in the growth of society is that of changeable relations offering fresh incentives. Human history becomes organic and progressive by virtue of the diverse impulses which arise between persons and classes within the nation, and between nations in the primitive diversity and unending flow of circumstances. An immediate variety of ministration arises between individuals, growing out of diversity of powers and diversity of positions. A second diversity is that between occupations and classes; a third appears between nations in the household of nations; and a fourth, between different periods in the successive unfolding of the race. Between all of these there are ever-changeable conditions of reaction, which induce in them all unending modifications of action.

This diversity and fluctuation in the circumstances of life occasion organization in each community, and tend to continuous evolution in successive periods. Both of these results are very obvious in history, though both are

inchoate. Civilization within a nation arises in connection with a division of labor, and is accompanied at every stage by still farther division. Each class, occupation, and person play a specific part in reference to every other class, occupation, and person. The completeness of these several services within themselves, and their fortunate relation to each other, determine the grade of civilization. This development of diverse functions in the economic world is the primary truth of political economy; while the justness and beneficence that guide them indicate the moral force present.

Nations between themselves by national characteristics, by local advantages, and by the momentum of movement, tend to establish mutual ministration and advantageous commerce. This law in this form of its application has long been resisted by the narrow and hostile spirit of nations, each striving to find its own gains in oversight of the gains of other nations, or in hostility to them. The great problem of statesmanship lies very much here, in the wise acceptance and fortunate union of both applications of the law, development within the nation and development of the nation as strengthened, stimulated, and nourished by other nations. The extension of commerce and social intercourse which find their ground in this diversity of relations is becoming daily a more distinctive and powerful adjunct of progress. The broad economic, social, and moral forces which promote union have begun to declare themselves, notwithstanding the greedy, passionate, national temper which often hides itself under patriotism, though in itself as mischievous and anarchical as is personal violence within the community.

Between different periods the same diversity of conditions is manifest, and it establishes an organic and pro-

gressive movement between them. As successive varieties in biology arise from a change of conditions in connection with previous life, so are the successive stages of civilization both built upon and evoked from previous ones. Greece was a mistress in art not for her own time only, but for subsequent times as well. When so novel a temper as that expressed in Gothic art, and one so native to the soil from which it sprang, had possession of Europe, it was only preparing the way for a composite art in which all the old impulses should reappear. The legal idea which found such continuous development in Roman history, has renewed itself under new conditions in canon law, in common law, and in the jurisprudence of European states. The same forces which first organize the nation, tend also to organize nations, and to push successive periods forward in one grand march of civilization. The movement is very imperfect in each phase, and increasingly complex in advanced phases, but the forces which initiate it are perpetually operative to perfect it, and acquire increased energy and precision with each step of advance. The undeniable presence, therefore, of these organic and progressive forces in primary movements, is a plain declaration of the complete evolution in which they are taking part. The magnitude of the facts may easily obscure our vision of them, but their nature remains the same, and is disclosed in each portion.

A third law, allied to this law of changeable conditions, is that of a dominant tendency. Communities, nations, periods, are not subjected to an even balance of forces, or to forces wholly variable, but to some more or less decided preponderance of influences, which readily establishes a current, for the time being controlling. A movement, once initiated, gathers energy by an increase of its own

conditions. This law is conspicuous in all social changes, and in the progress of thought. Our own period is one of the rapid extension of scientific truth, and this growth in one direction is accompanied with weakness and distrust in other directions. While we gain the action of our own time, we suffer also all its reactions; every fresh success in physical inquiry begets new enthusiasm, and adds to the resources of farther investigation. An increasingly large number of persons share the dominant tendency, and help to swell it. These, moved by narrow insight and ready sympathy, become more and more caustic in criticising the past, and more and more extravagant in predicting the future. They see only what lies before them in their own line of effort, and mistake the present direction of progress for the permanent line of march.

A period of invention multiplies in the same way the energies of industrial life, and fills the welkin with the hum of activity. Such a movement is progress, and stands for progress, but by no means in that complete and final way which those fancy who are taken up by it. The failures of each tendency are as conspicuous as its successes, and wait their time to give rise to a corrective effort.

Like tendencies declare themselves in social progress. At one time individuation is the prevailing idea; civil and social bonds are attenuated to the last degree. The individual is regarded as the ultimate seat of rights, which he may delegate or resume as he pleases. At another time centralization prevails, and society organizes itself compactly in oversight of individual liberty. The national element asserts itself strongly, and there is a general desire in every instance to extend and maintain the integrity of the nation. Some dominant tendency is sure

to declare itself in every active period, and to direct every strong movement; and this tendency for the time being expresses the most urgent need of society, and explains much that occurs. That community or that age in which a dominant idea discloses itself, and which is most intensely true to that idea, becomes at once a power in human history. Results are reached which are not again lost.

But this law of tendencies is closely associated with the law of rhythm. The two give occasion to each other. While a distinct movement is initiated by a want of balance among the forces operative, and, being initiated, rapidly accumulates strength, it must also, by virtue of the disproportion and excess that are in it, finally exhaust its own motives and resources. A reactionary tendency must then take its place. Thus the evils which show themselves in connection with excessive individuation lead to a fresh assertion of the common life, and a vigorous effort to strengthen the organization of the community. In the United States the organic force is re-asserting itself in many ways. Men are not content that the well-being of the entire community in all its higher interests should, under the phrase of freedom of trade, be subject to an unscrupulous traffic in intoxicating drinks; or that the very conditions of sustenance for the many should be recklessly endangered by the speculations of a few; or that extreme wealth should be allowed to intrench itself in the natural monopolies of its own position. Society is feeling about for a remedy of these evils. It waits for a wise way in which to assert that common life on which ultimately the individual life must also depend.

The present depreciation of philosophy and high estimate of empirical knowledge are also to be reversed, be-

cause of the excess in them both. The subsidence of faith is certain to be followed by its full tide. The principles involved affirm this rhythm, and all history discloses it. Facts which are not so interpreted as to nourish the higher life will cease to interest that life, and the mere ennui of unsatisfied thoughts will redirect the mind. The political and religious reaction in England after the Restoration is a notable instance of an astonishing and almost mechanical return of public opinion to its old channels.

The successive stages of growth are largely determined by these two laws of tendency and rhythm, of action and reaction. A movement once established conditions in part the movement which is to follow it, and to supplement it. Jesuitism sprang out of the loosening of religious ties by reform. In literature a period of invention is succeeded by one of criticism, and criticism, when it has become stale and barren, provokes independent effort, as in Wordsworth. The excess of each tendency establishes a rhythmic vibration between it and the succeeding one.

These two laws lead to still another law in human progress—that of transfer. Periods and places, as well as movements, are exhausted and replaced by other periods and places. Not merely "the star of empire westward takes its way," but that race development of which this star is the conspicuous symbol. The growth of the race contemplates the falling back and dropping out of nations who have long taken part in it, and the inclusion of new nations. Not only do tendencies exhaust themselves; rhythms may exhaust themselves also; nations may cease to be capable of the reactions which are called for to correct their errors, and these errors may accumulate upon them till all forward movement is lost.

We, as a nation, have, by a combination of favorable circumstances, just gone through a thorough, heroic, and progressive reaction, and we have thus gotten anew the conditions of fresh combinations and fresh growth. Simple civilization—that is, the multiplication of the appliances of life—tends to multiply and deepen the moral questions on which social construction turns; and if these questions are not met in a progressive spirit, one or other of two things follows. Either society becomes dead, as in the East, under mischievous and inflexible customs; or, better, as in the West, meets with overthrow, and gives place to new nations and races. The apparent immobility of the East is only relative, and in the lapse of centuries would still be open to the slow remedy of convulsion and conquest. The law of transfer comes into action when the old channels of progress are clogged, and cannot clear themselves. The movement is renewed elsewhere, with fresh material under new conditions. If it, in turn, once more ceases, it in the meantime attains a higher point, and scatters new influences.

The Renaissance is a clear example of a new civilization, springing up on ground a little removed from that occupied by the old civilization, and in due time appropriating to itself all the gains of the past. The history of America has shown the unrestrained development of principles which could not find unobstructed expression in the Old World. This new phase of social life has been the fruit of transfer. Vegetable life hardly owes more to fresh soils, than do social forces to fresh material. Each community remains plastic because of the brief life of individuals; the progress of the race is maintained because the nations which take part in it so easily perish, passing this wealth by inheritance to wiser and more untrammelled heirs.



The moment growth in a nation begins to slacken, it begins also to set in motion influences which tend to remove elsewhere the burden of history.

A sixth law of social development is that of leadership. This may be either an intellectual and spiritual leadership, working long and silently in men's minds, and disclosing itself with much obscurity and delay in any collective movement; or it may be a social leadership, instant and brilliant in its results. The first form is the leadership of insight, and of the rare gifts of genius. The prophets of Israel stand for it in the religious world, Plato and Aristotle in philosophy, and the great poets in the world of letters. This leadership is developed slowly, and the more slowly as it is fitted to become extended and commanding. This silent leadership prepares the way for those general movements which give occasion for more attractive and ambitious social leadership. The social leader may, like Luther, have extended insight, but the insight must be united sympathetically to the thoughts of men, and so be able to initiate and direct a popular movement whose conditions are already present. Conspicuously great men of this order owe their influence to the clearness and human force which they are able to impart to ripe conditions of development in belief and in action. Their office is to initiate changes already profoundly included in existing social states. The popular mind must have this leadership before its forces can be marshalled for effective work. The prominent character of the service of leaders of this order assigns them in men's thoughts far more importance than belongs to them. Hero-worship is the result of the dazzling glitter in sunlight of superficial activity. The hero is only the last term in a complex series, long in the process of

formation. The more mechanical and arbitrary leadership is, the more astonishing and interesting it seems to be to most persons. Thus military leadership, uniting men under animal instincts and blind passions, has been the most visible and fascinating factor in human history, though one in fact quite subordinate to other influences. Leadership may be forward, in the true lines of progress; or it may involve an indifferent surging of society from side to side; or it may be backward, under retrogressive impulses. Napoleon presents a wonderful example of the sudden return of a great nation, under a marvellous leader, to the superannuated sentiments of a barbaric period. This enthusiasm of conquest was disguised by the most transparent pretence of liberty and the popular will.

Leadership, the last significant factor in progress, is least plainly included in general causes, and the leader seems to have, and has, special significance in the spiritual government and direction of the world. A single mind, under the powerful action of the truth, is the clearest impersonation of the Spirit of Truth, is the marvellous fact of inspiration.

A last law of progress is that of synthesis. The true historic movement embraces the entire family of man. It also includes, in the final product, the gains of every separate form of civilization. This second assertion is involved in the continuity of movement, the first law which we mentioned in social unfolding, and one which is a universal characteristic of growth. In the measure in which this law of continuity should cease to be applicable, change would cease to be growth. The relatively perfected product must embrace not simply "the free harmonious humanity of Hellenism, the self-supporting manliness of Roman antiquity," but every national

excellence and individual virtue which spring up under the constructive conditions present along the line of progress. Growth is the reconciliation and inclusion of all gains achieved under any advantage. The rejection of any, and the loss of any, would imply a falling off of a portion of the forces already at work, and would bring unfortunate limitations to all the other forces. It would be a natural selection in favor of the weaker and the worse; a disturbance of the significant character of the whole movement.

The first assertion, the unity of the race in development, we wish more particularly to cover by the law of synthesis. It turns on the fact that the material to be shaped within itself is the race of man. The organic unit has these natural limits. No foreign material is admissible within the living organism; encysted there it gains no position. If any class or nation or race fails to find a sufficient and a free function within the human family, in that measure is organization incomplete. The class or race or nation is still present with its own unconciliated influences. Its defects and difficulties extend beyond itself to the entire community. In our Southern States, no worthlessness or vice can belong to the colored population, which does not, in some form of sympathetic action or of resentful reaction, vitiate the entire community. Each constituent in society must be shaped and re-shaped till it plays some wholesome part, and that too with the freedom, the ease of change, which implies extended vitality under one constructive law. A futile effort at exclusion, or a mechanical inclusion, is equally hostile to development.

This law of synthesis in growth is hardly more than the moral law. The moral law finds its field in the actions of

men as they bear on each other. It is its purpose to unite their actions in one line of growth. It is this harmonious result that lies as an embryonic life in the two great commands of love. So far as growth is checked, the moral law is annulled. The moral impulse is the organic impulse in a clear, intellectual form. For any portion of men to withhold or limit the rights of any other portion, or even to fail of an active interest in their full attainment, is immoral, is a loss of the synthetic incentives that are struggling to build men together in the Kingdom of Heaven. From a moral point of view, those who narrow the gains of their fellow-men, narrow still more their own gains. A servile spirit is bad, but an arrogant one is worse. Submission blinds the eyes, but not so much so as assumption. Affections linger longer in the poor soil of servitude than they do in the alkaline soil of tyranny. The chief magistrate of the Confederate States put their claims in these words: "This, our new government, is the first in the history of the world based upon the great physical and philosophical and moral truth, that slavery is the normal condition of the negro." Five years sufficed for the awakened moral forces of the world to overwhelm this assertion, made in the face of Christian history.

One of the most just and commanding points from which to overlook the problem of human life, is this very point of synthesis. The moral impulse is the synthetic impulse, the synthetic impulse is the organic impulse, the organic impulse is leading on to the Kingdom of Heaven. In the degree, then, in which men are being united, different classes in the same nation, different nations with each other, and all races in the gains of one spiritual life, is the Kingdom of Heaven in its nature and bounds being defined. While doubts may easily be raised as to the

value of apparent gains in specific things, it can hardly be denied that, in spite of the strife which yet remains, the unity of the world, not commercially merely, but socially and morally, is far greater than ever before, and is gaining every year new power. Not till organization covers the entire field which belongs to it, can it perfect its work in any portion of that field. If it is true that "Germany is the only country in the world in which an apothecary can not make up a prescription without being conscious of the relation of his activity to the conditions of the universe," then Germany is as yet the only country in which a profound race-consciousness has been awakened. The fundamental policy of empirical philosophy is, in this connection most unfortunate: "Contentment with the world which is given us, and the exclusion of every thing supersensuous." The world which now is, is only the seed of the world that is to be, and the force of its unfolding is a supersensuous, synthetic life.

Under these laws of continuity, changeable conditions, dominant tendency, rhythm, transfer, leadership, and synthesis, we are able to see the general grounds and causes of progress; and, under a controlling Spirit of Truth, the certainty of progress. The Spirit of Truth, the living and eternal coherence of spiritual impulse, at once unites the more fixed, and supplies the more variable, terms of growth. Each successive step in a coherent spiritual development implies fixed relations, and yet turns on the immediate inspiration of leadership. The synthetic force among men is spiritual truth, an increasing insight into the conditions of extended life, and its steady transfer to the common consciousness. The product of this development is a universal kingdom, and that kingdom is the Kingdom of Heaven.

We may easily see why the growth of society is slow; though it can hardly be said to be slow, when we compare the magnitude of the end aimed at, and the time occupied with other processes and other periods of development. If this social unfolding is to be the flexible, comprehensible, and beautiful product of growth; if it is to be comprehensive and perfect within itself, reaching its own bounds, we see at once that a spiritually complete consciousness is to be awakened in each mind by a slow organic extension from mind to mind. All the physical and all the social conditions for the fortunate and effective action of this life must also accompany this consciousness, and be its own product. There is then no part of the physical or of the spiritual world to which such a growth does not extend, in its antecedent and in its subsequent conditions; and as a movement it must be and must remain as inclusive as that flow of events which measures the eras of time.

Nor can this development, under existing terms—nor perhaps under any supposable terms which shall cover its fundamental idea of growth—be fortunately accelerated. Leadership is the most conspicuous and promising term in rapid progress. But leadership does not avail for sudden change, save as the conditions of change have been deeply implanted in men's minds. Rapidity of movement is often a thing of the senses simply, like the sudden descent of a landslide. The preparation has been slow and patient.

Nor would the speed of progress be materially altered by an increase in the more profound leadership of genius. Genius also must make itself effective by a slow descent into the thoughts of men; and its lessons must neither be too remote nor too extended. Even the Divine Spirit

of Truth present in the life of our Lord has not brought forward the centuries at a pace corresponding to its own force. So far from men and so high above their thoughts were His thoughts, that impalpable mists and thick clouds have gathered in the interval; and even when men looked upward they did not see the sun. Greater results could not have been reached by more instruction, for the centuries have not sufficed to gather the first-fruits of what was bestowed. Christ felt it to be expedient that he should leave his disciples, simply that they might be enclosed less mechanically in a movement they did not understand. Our impatience is the impatience of children, who wish the spring to follow at once upon the winter, and the summer on the spring, themselves oblivious of the mighty and all-absorbing changes that are taking place about them.

The coming of the Kingdom of Heaven bears to our minds the appearance of inadequacy and accident and unreasonable delay, because it is so broad a movement and its laws sweep in and through so many other laws. What men need is that inner supersensuous illumination of the mind, which is the gist of science and of art, and still more of religion, and by which they become conscious of the great movements about them, feel the tidal waves beneath them, and are made sympathetic with the divine purpose in its comprehensiveness. Labor sobers, confirms, and renews the hopes. We, through the Spirit, wait for the hope of righteousness by faith. The fruit of the Spirit is love, joy, peace. As many as are led by the Spirit of God, they are the sons of God.

**PROSE MASTERPIECES FROM MODERN ESSAYISTS :** comprising single specimen essays from Irving, Leigh Hunt, Lamb, De Quincey, Landor, Sydney Smith, Thackeray, Emerson, Arnold, Morley, Helps, Kingsley, Ruskin, Lowell, Carlyle, Macaulay, Froude, Freeman, Gladstone, Newman, Leslie Stephen. These essays have been selected with reference to presenting specimens of the method of thought and the literary style of their several writers, and also for the purpose of putting into convenient shape for direct comparison the treatment given by such writers to similar subjects.

THE MUTABILITY OF LITERATURE, by Irving.  
THE WORLD OF BOOKS, by Hunt.  
IMPERFECT SYMPATHIES, by Lamb.  
CONVIVATION, by De Quincey.  
PETITION OF THE THUGS, by Landor.  
BENEFITS OF PARLIAMENT, by Landor.  
FALLACIES, by Smith.  
NIL NISI BONUM, by Thackeray.  
COMPENSATION, by Emerson.  
SWEETNESS AND LIGHT, by Arnold.  
POPULAR CULTURE, by Morley.  
ART OF LIVING WITH OTHERS, by Helps.

MY WINTER GARDEN, by Kingsley.  
WORK, by Ruskin.  
ON A CERTAIN CONDESCENSION IN FOREIGNERS, by Lowell.  
ON HISTORY, by Carlyle.  
HISTORY, by Macaulay.  
THE SCIENCE OF HISTORY, by Froude.  
RACE AND LANGUAGE, by Freeman.  
KIN BEYOND THE SEA, by Gladstone.  
PRIVATE JUDGMENT, by Newman.  
AN APOLOGY FOR PLAIN SPEAKING, by Stephen.

3 vols., 16mo, bevelled boards, with frontispieces on steel, gilt top, in box, each . . . . . \$1 25  
The set in extra cloth, with cloth box . . . . . 4 50  
The same in Russia-leather binding and case, round corners, red edges . . . . . 10 00  
The same, large paper edition, with portraits, cloth extra, gilt top, rough edges . . . . . 7 50

**THE ESSAYS OF ELIA.** By Charles Lamb. "The Temple Edition." Handsomely printed on laid paper from new type, with etchings by James D. Smillie, F. S. Church, R. Swain Gifford, and Charles A. Platt. Octavo, cloth extra. . . . . \$4 50

The same, Islington Edition, 250 copies only, with proof impression of etchings on *satín*. Quarto, *numbered*, printed upon pure linen paper; cloth, uncut . . . . . \$10 00

**AUTHORS AND PUBLISHERS; A MANUAL OF SUGGESTIONS FOR BEGINNERS IN LITERATURE:** comprising a description of publishing methods and arrangements, directions for the preparation of MSS. for the press, explanations of the details of book-manufacturing, with instructions for proof-reading, and specimens of typography, the text of the United States Copyright Law and information concerning International Copyrights, together with general hints for authors. Octavo, cloth extra . . . . . \$1 00

"Full of valuable information for authors and writers. \* \* \* A most instructive \* \* \* and excellent manual."—*Harper's Monthly* (Easy Chair).

G. P. PUTNAM'S SONS, PUBLISHERS,  
NEW YORK AND LONDON.



# IMPORTANT STANDARD WORKS

RECENTLY PUBLISHED.

**PRE-HISTORIC AMERICA.** By the MARQUIS DE NADAILLAC, translated by N. D'ANVERS, author of "A History of Art." Edited with notes by W. H. DALL. Large 8vo, with 219 illustrations. \$3.00

**CHIEF CONTENTS.** Man and the Mastodon, The Klokkenmøddings and Cave Relics, Mound Builders, Pottery, Cliff Dwellers, Central American Ruins, Peru, Early Races, Origin of American Aborigines, etc., etc.

**THE DISCOVERIES OF AMERICA TO THE YEAR 1525.**

By ARTHUR JAMES WEISE. Second edition. One large octavo volume, with maps . . . . . \$4.50

The work presents the most important and veritable information of what was known by the ancients respecting the continent and islands in the Western Hemisphere, together with that found in the Sagas of Iceland and Greenland in relation to the discoveries of the Northmen, and also that contained in certain rare books, manuscripts, and maps, descriptive of the explorations of Columbus, the Cabots, Cartier, Verrazzano, and other navigators, to the year 1525.

**A HISTORY OF THE THIRTY YEARS' WAR.** By ANTON

GISELEY, Professor of German History in the University of Prague.

Translated by ANDREW TEN BROOK, recently Professor of Mental Philosophy in the University of Michigan. Second edition. Two volumes, octavo, with maps and illustrations. . . . . \$4.00

**LIFE AND TIMES OF GUSTAVUS ADOLPHUS.** By the

Hon. JOHN L. STEVENS, LL.D., recently United States Minister to Stockholm. 8vo, with new portrait engraved on steel. . . . . \$4.50

**THE COMPLETE WORKS OF ALEXANDER HAMILTON.**

Including his Contributions to the "Federalist." Edited, with introduction and notes, by HENRY CABOT LODGE. Nine volumes, handsomely printed from type, with two portraits engraved on steel. *Edition limited to 500 copies.* . . . . \$45.00

## CONTENTS.

- |   |  |
|---|--|
| I. Revolutionary. Government and the Constitution.    | V. Foreign Relations.                                |
| II. Taxation and Finance.                             | VI. The Excise and Whiskey Rebellion. Miscellaneous. |
| III. National Banks. Coinage, Industry, and Commerce. | VII. Miscellaneous.                                  |
| IV. Foreign Relations.                                | VIII. Private Correspondence.                        |
|   | IX. The Federalist.                                  |

**G. P. PUTNAM'S SONS,**

**New York and London.**

BY THE SAME AUTHOR.

- I. **The Philosophy of English Literature.** Lectures delivered before the Lowell Institute, Boston. 12mo, cloth. \$1.75
- II. **The Principles of Psychology.** 12mo, cloth 1.75
- III. **Comparative Psychology; or, The Growth and Grades of Intelligence.** 12mo, cloth . . . . . 1.75
- IV. **Science, Philosophy, and Religion.** 12mo, cloth . 1.75
- V. **The Philosophy of Religion; or, The Rational Grounds of Religious Belief.** 12mo, cloth 1.75
- VI. **The Principles of Ethics.** 12mo, cloth . . . . . 1.75
- VII. **The Principles of Natural Theology.** 12mo, cloth, 1.75
- VIII. **Philosophy of Rhetoric.** 8vo, cloth . . . . . 1.75
- IX. **Science of Mind.** 8vo, cloth . . . . . 2.00
- X. **Words of Christ.** 8vo, cloth . . . . . 1.75

G. P. PUTNAM'S SONS, New York.